

# KCStat

[kcstat.kcmo.org](http://kcstat.kcmo.org)

March 1, 2016

#KCStat

Transportation & Infrastructure



# Objectives

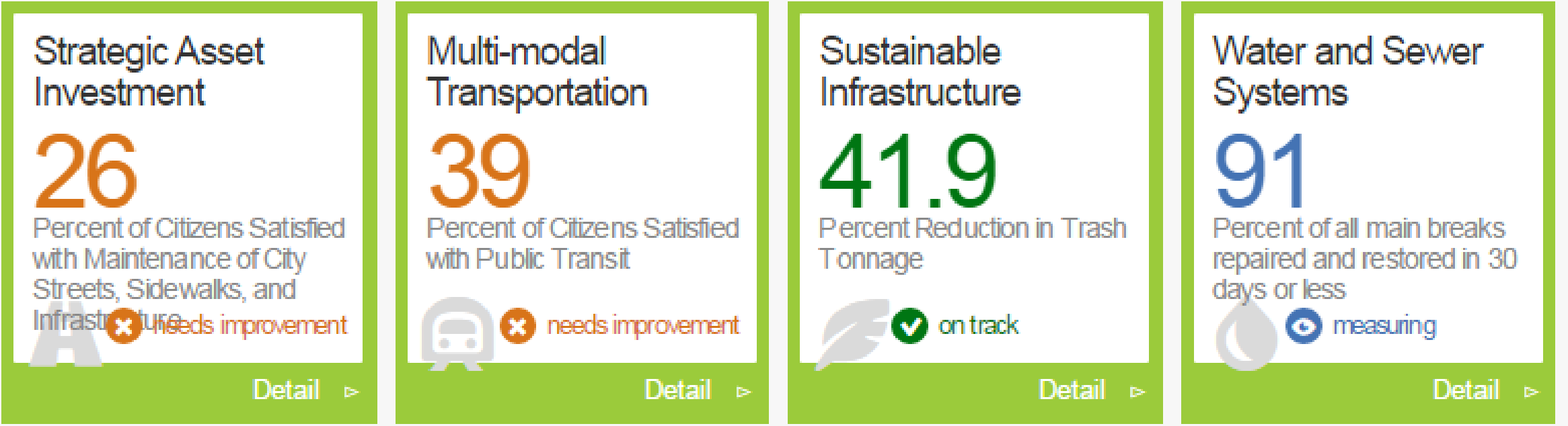
1. Develop asset-specific plans to maintain City infrastructure to maximize useful life. (June 2017)
2. Implement the Envision Sustainable Infrastructure Rating System in all infrastructure planning and projects to maximize sustainable development solutions. (through 2019)
3. Develop & increase access to multi-modal transportation options such as buses, bicycle lanes, trails, sidewalks, and the streetcar system. (through 2019)
4. Create a plan to implement strategic infrastructure investments in the Twin Creeks area that capitalizes on natural features, promotes unique development patterns, builds civic space, and promotes sustainable design and construction. (through 2019)
5. Execute consent decree requirements for the overflow control program. (Ongoing)
6. Continue to implement the City's adopted climate protection plan. (Ongoing)
7. Increase the waste diversion rate through policies and programs that promote recycling and reuse. (2016)
8. Monitor and maintain the timeliness of water main repair and restoration. (Ongoing)
9. Implement an American with Disabilities Act (ADA) Plan to meet the Department of Justice's requirements. (Ongoing)
10. Facilitate the development and use of facilities, venues, and spaces for diverse arts activity throughout the City. (Ongoing)

# Measures of Success

Measures of Success	FY15 Actual	FY16 Target	FY17 Target
Percent of street segments rated average or better (PCI)	--	60%	60%
Percent of bridges rated good or excellent (Bridge Condition Rating)	77%	79%	70%
Percent of citizens satisfied with overall maintenance of city streets, sidewalks, & infrastructure	30.2%	28%	32%
Percent of citizens satisfied with overall quality of public transportation	39%	41%	43%
Percent of citizens satisfied with maintenance of boulevards & parkways	67%	75%	75%
Greenhouse gas emissions from municipal operations (Thousand MT CO <sub>2</sub> e)	284	292	286
Days to complete 90% of water main repairs & restorations	24	30	30
Trash Tonnage Collected	88,590	86,818	85,082

# KCStat Dashboard Snapshot

## Infrastructure and Transportation



# Nationwide: Transportation & Infrastructure Investment

**\$57 Billion**

*Nationwide investment to  
correct sewer overflows*

- **WASTEWATER OVERFLOW**  
*2004 EPA Report to Congress*

**\$1 Trillion**

*Nationwide investment  
by 2037*

- **WATER INFRASTRUCTURE**  
*2012 AWWA Report: Buried No Longer*

**\$1 Trillion**

*Nationwide Investment  
by 2020*

- **TRANSPORTATION INFRASTRUCTURE**  
*2013 American Society of Civil Engineers: Failure to Act*

# Kansas City: Transportation & Infrastructure Investment

**\$1.28 Billion**

*FY17-21 Investment*

- **WASTEWATER INFRASTRUCTURE**  
*FY17 Capital Improvements Program*

**\$500 Million**

*FY17-21 Investment*

- **WATER INFRASTRUCTURE**  
*FY17 Capital Improvements Program*

**\$26.6 Million**

*FY2017 Submitted Budget*

- **TRANSPORTATION INFRASTRUCTURE**  
*FY17 Roads & Maintenance Investment*

## Multi-modal Transportation

39

Percent of Citizens  
Satisfied with Public Transit



needs improvement

Detail >

# Multi-Modal Transportation

## Objective 3

Develop & increase access to multi-modal transportation options such as buses, bicycle lanes, trails, sidewalks, & the streetcar system. (through 2019)



# Citizen Importance – Satisfaction Matrix

*Source: Citizen Survey, FY16 YTD*

## Service

## FY2016 Importance-Satisfaction Rating 3Q YTD

Maintenance of streets/sidewalks/other infrastructure

1

Quality of neighborhood services

2

Quality of public transportation

3

Quality of police services

4

Stormwater management system

5

Quality of water utilities

6

Parks & recreation programs/facilities

7

Effectiveness of communication with the public

8

Quality of solid waste services

9

Customer service from city employees

10

Quality of fire/ambulance services

11

Quality of airport facilities

12

Quality of Health Department services

13

Municipal court services

14

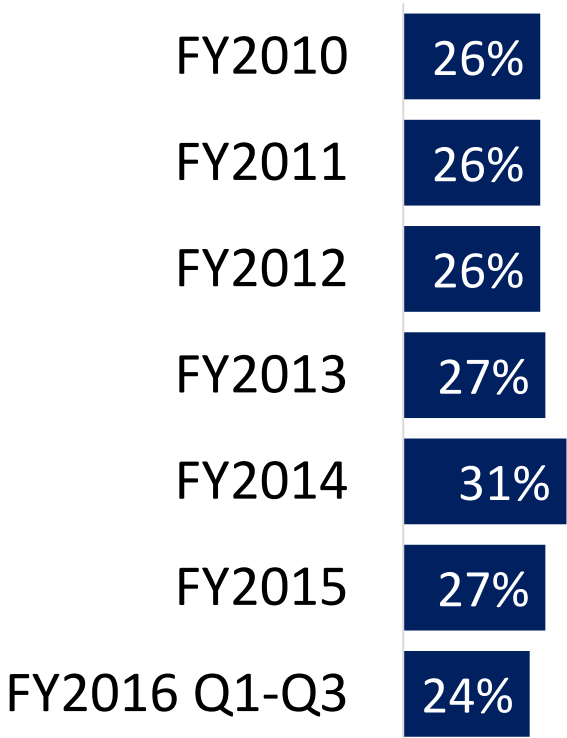
Quality of 311 services

15

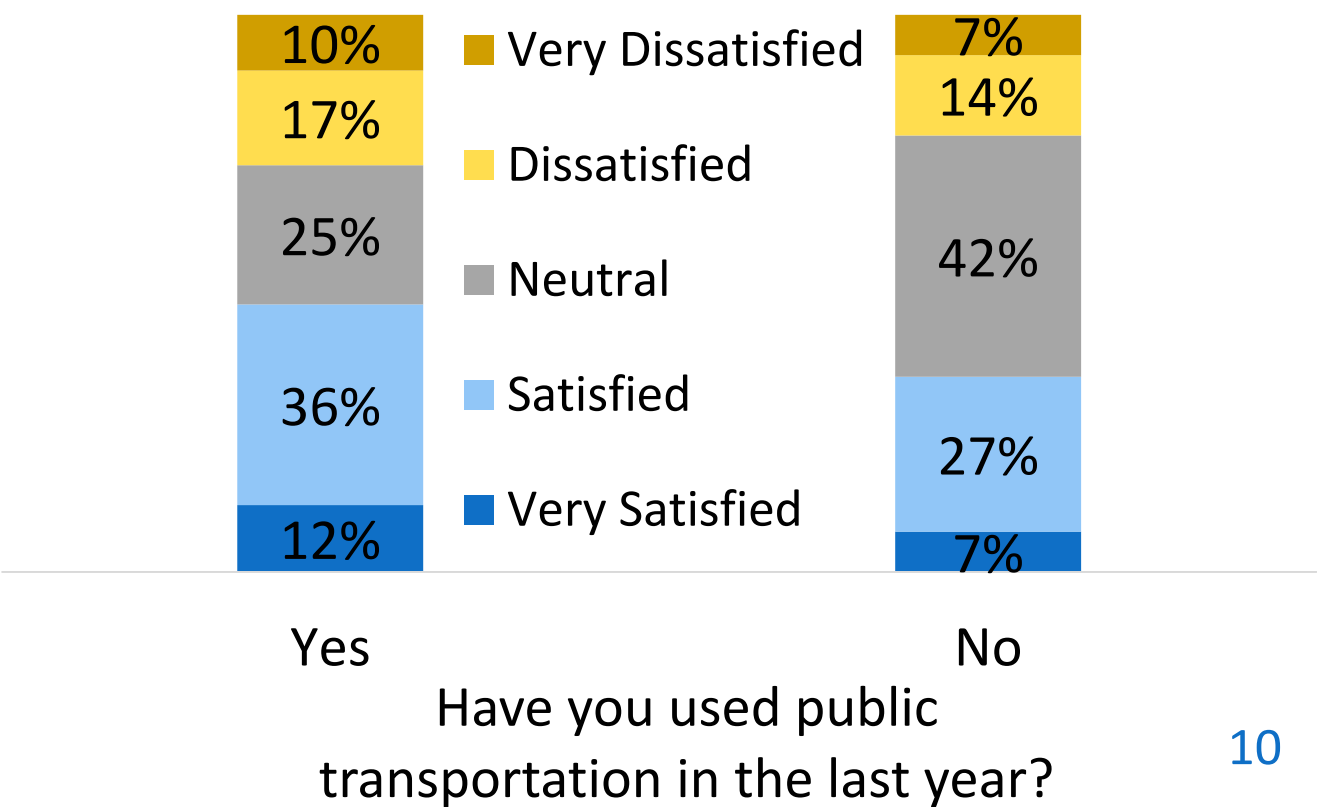
# Citizen Use of Public Transportation

Use of public transit is **down** & users are more likely to be **very satisfied** & **very dissatisfied** than non-users.

Have you used public transportation in the last year?



Satisfaction with public transportation by users/non-users (FY16 Q1-Q3)



Source: Citizen Survey, FY10 – FY15 (kcstat.kcmo.org)

Streetcar

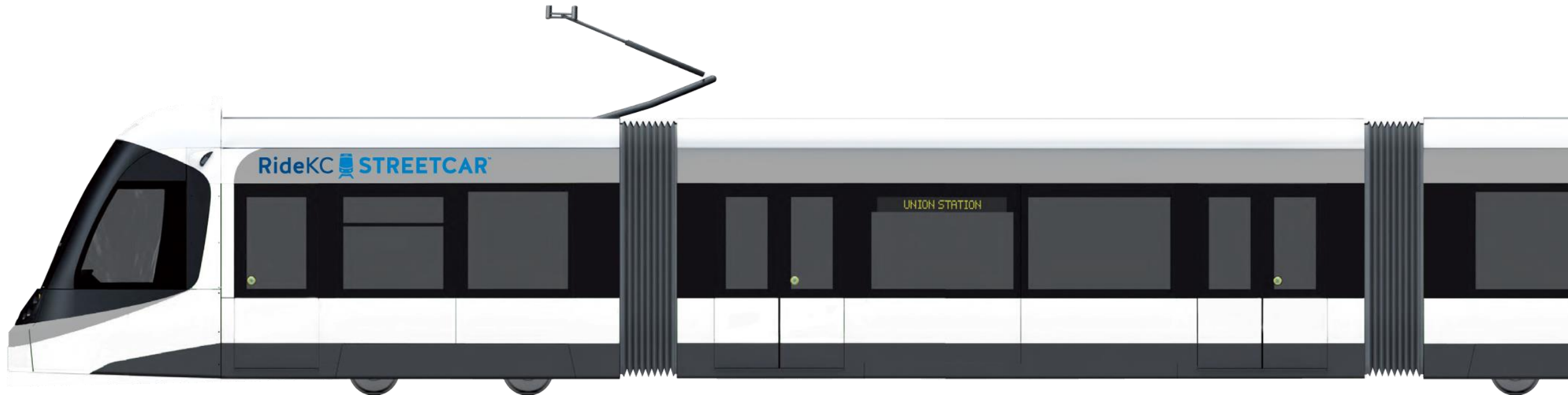
KCATA

Active  
Transportation

Sidewalks

Streetcar Coming Soon!

READY TO RIDE ON  
5.6.2016



# Streetcar Performance Metrics

Metric	Formula	Frequency	Target	Performance	Fee adjustment
On-Time Performance	# of on-time trips/ total trips	Monthly	92%	95.01% & above	+1%
				92% - 95%	0%
				88% - 91.99%	-1%
				87.99% & below	-2%
Percent of Trips Completed	# of trips completed/ # of trips scheduled	Monthly	98%	98% & above	0%
				95% - 97.99%	-1%
				90% - 94.99%	-2%
				89.99% & below	-3%

First 3-6 months of streetcar metrics are expected to have lot of variance due to an influx of riders

# Smart City Infrastructure

## Streetcar Line:

Streetcar line will feature WiFi coverage from River Market to Union Station. Citizens will also have access to 13 KCityPosts at all Streetcar Stops.

## WiFi Zone:

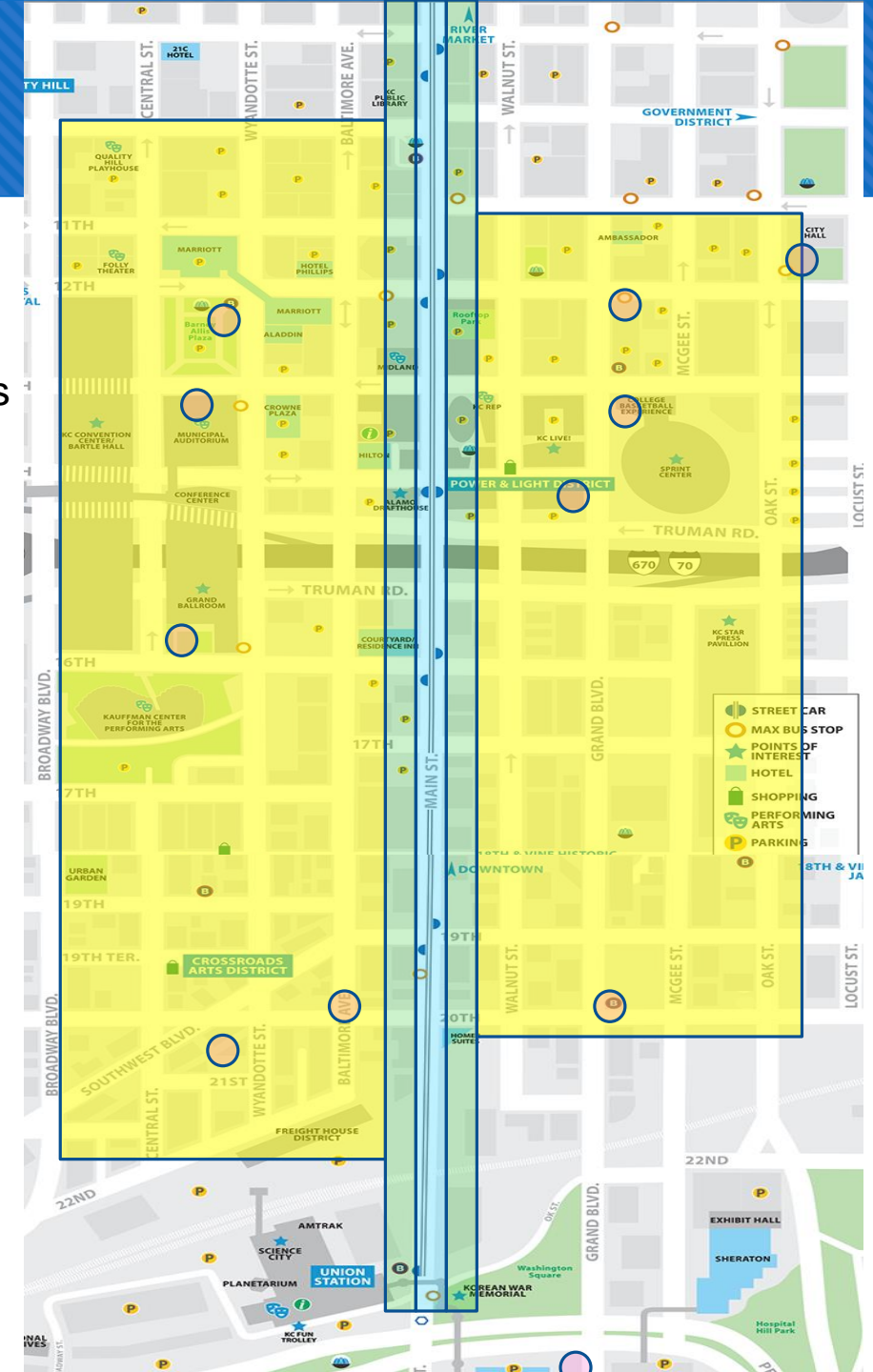
Over 300 WiFi transmitters will provide coverage beyond the Streetcar line. This free WiFi will begin publicly visible testing by March 9. Approximate coverage area highlighted.

## KCity Post Kiosks:

Kiosks will give citizens point access to City data, commercial content for nearby businesses and hyper-local wayfinding and event information. Thirteen kiosks will be located on the streetcar line, 12 others will be deployed in the area.

## Traffic Signals and Streetlights:

Dynamic signals and lights will be responsive to citizen activity along Main St.



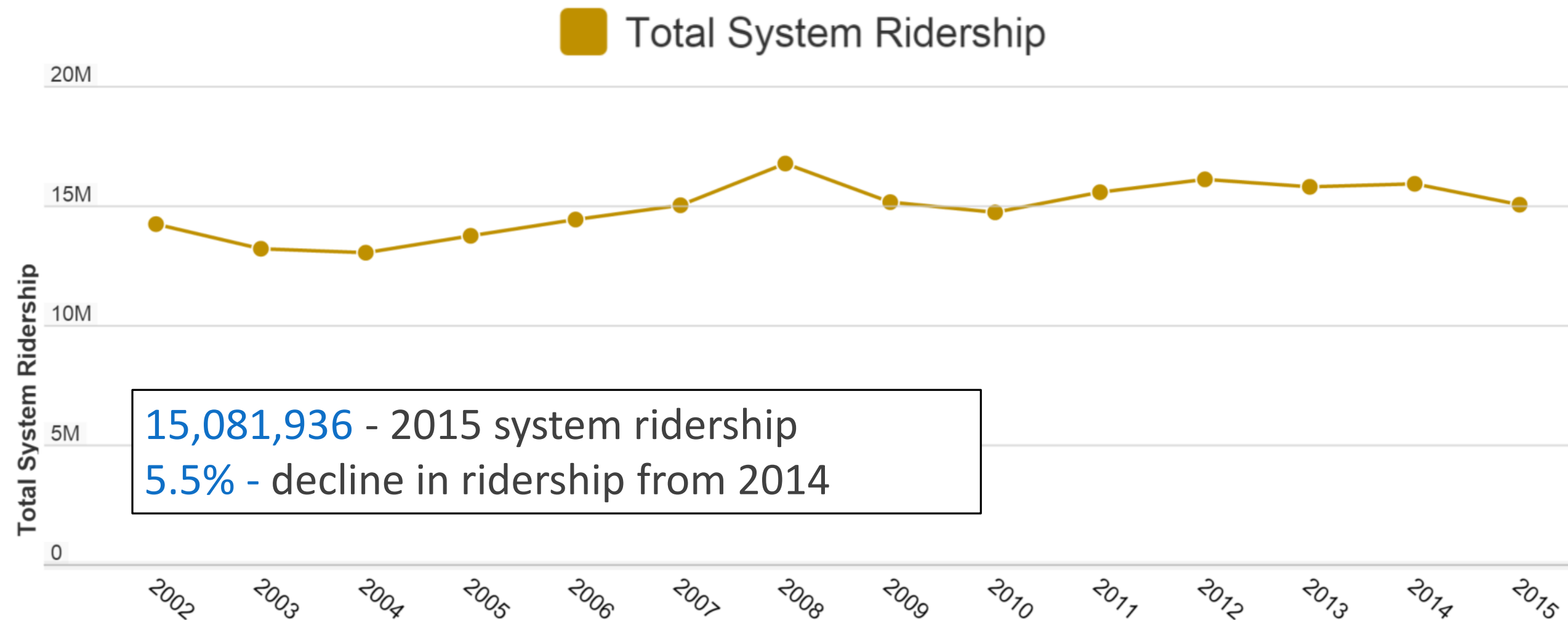
Streetcar

KCATA

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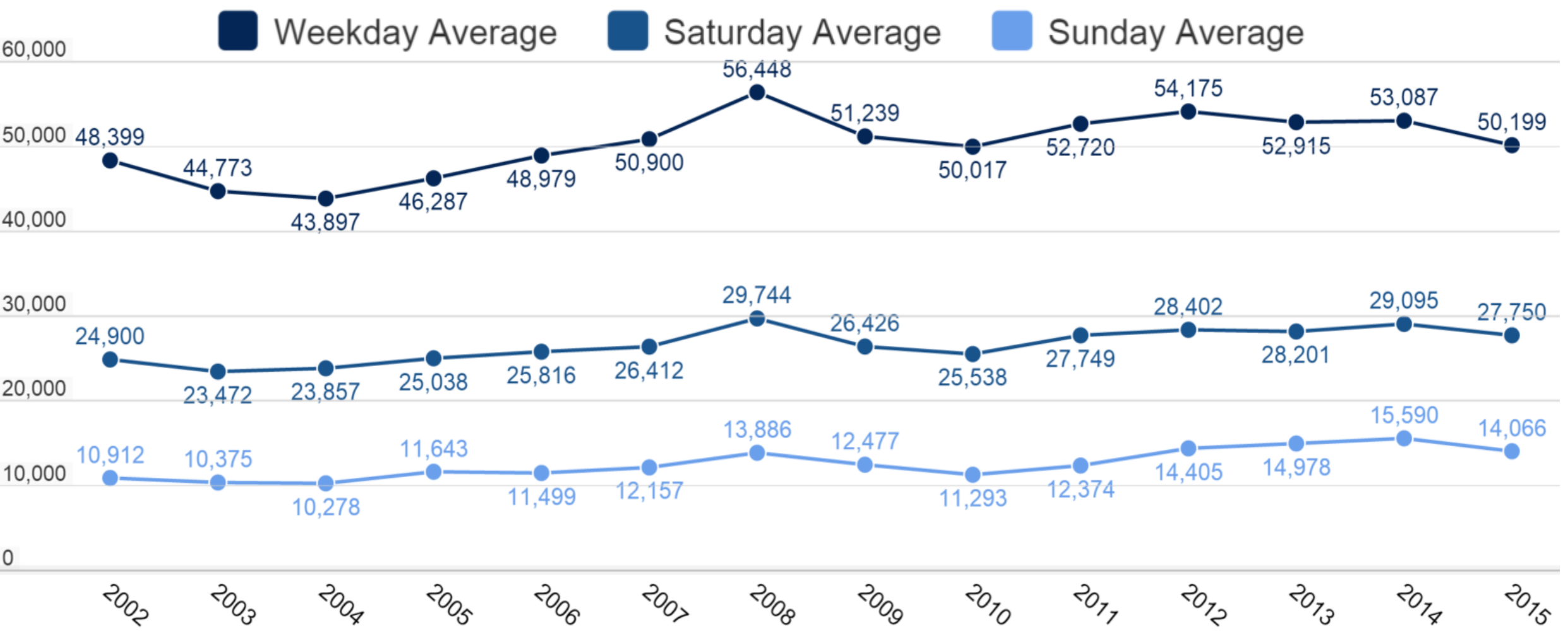
# KCATA Ridership – Total System Ridership





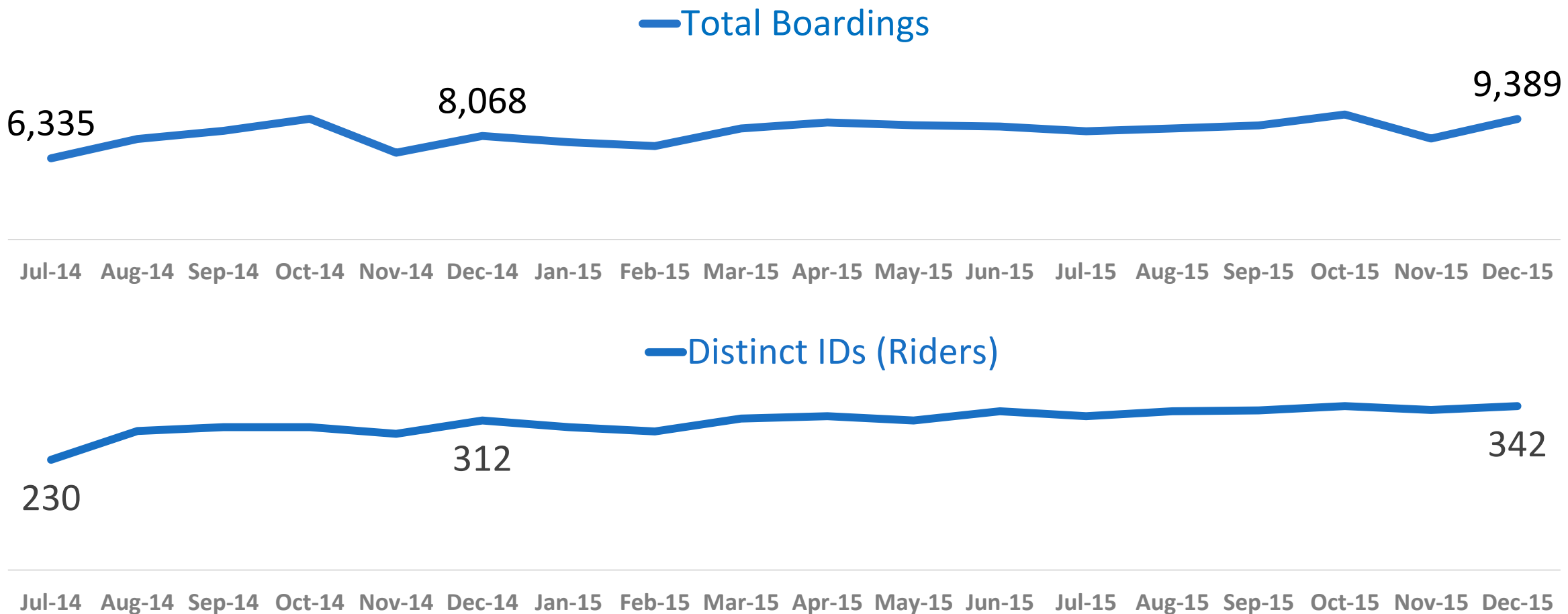
# KCATA Ridership – Average Daily Ridership

5% decline in average weekday ridership from 2014 to 2015



# City of KCMO Employee KCATA Ridership

16% increase in boardings from December 2014 to December 2015





# Transit Oriented Development

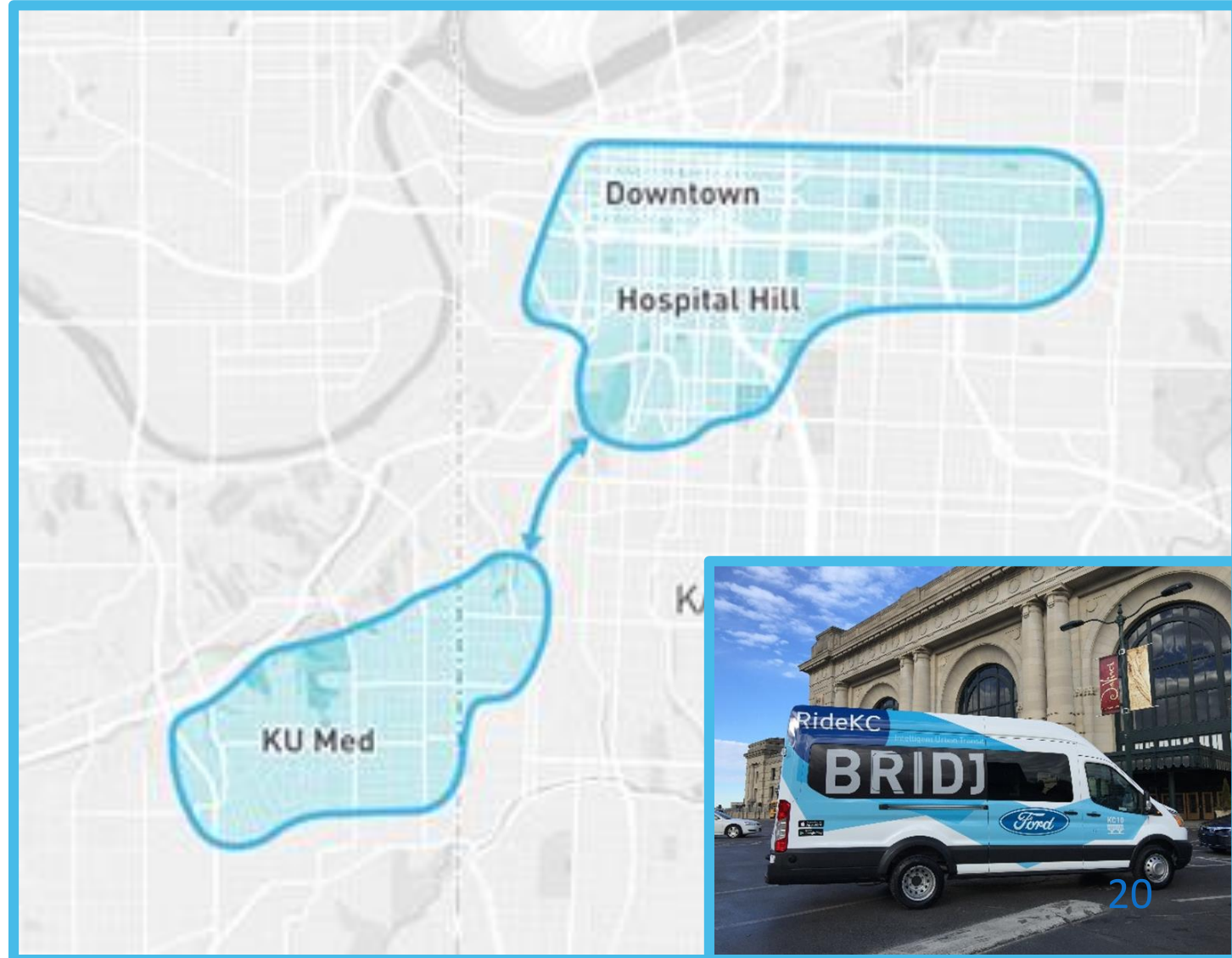
- 3rd and Grand
- Rock Island Rail Corridor
- Opportunities Along Prospect
- City TOD Policy





# Bridj On-demand Microtransit Pilot Program

- App Based Service
- KCATA Vehicles and Operators
- Two Connected Zones
- 6-10 a.m. & 3-7 p.m.
- \$1.50 introductory fare
- Starting March 7



Streetcar

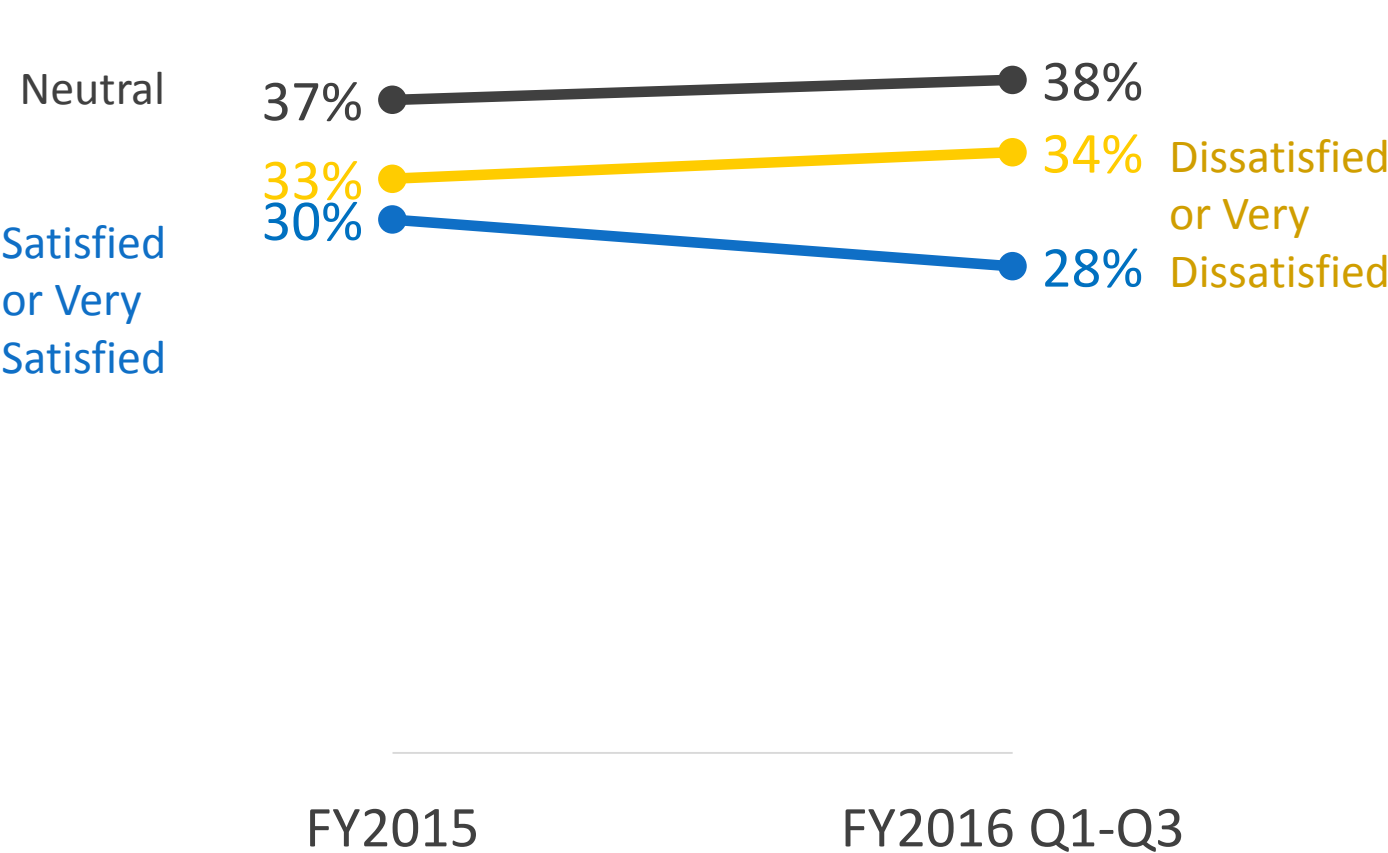
KCATA

Active  
Transportation

Sidewalks

# Citizen Satisfaction With On-Street Bike Infrastructure

On-Street Bike Infrastructure is ranked 6<sup>th</sup> in priority in the infrastructure section of the citizen survey



Council District	Percent Satisfied	Percent Dissatisfied
1 <sup>st</sup>	31%	29%
2 <sup>nd</sup>	35%	26%
3 <sup>rd</sup>	28%	30%
4 <sup>th</sup>	25%	43%
5 <sup>th</sup>	28%	30%
6 <sup>th</sup>	21%	43%
Citywide	28%	28%

Source: Citizen Survey, FY15 – FY16 YTD

# Projects To Construction



**Bike Box:** Bike box demarks dedicated space for cyclists at the intersection to allow them to advance in front of stopped traffic at a red light.



**Downtown Loop Bikeways:** 13 mile loop and spoke connecting downtown to several neighborhoods including road diet on Grand Blvd. **Anticipated Construction Bid – April 2016**



**Benton Bicycle Boulevard:** 5 miles of on-street bikeways from St. John to Volker/Swope/Blue Parkway adding enhanced sharrows, bike boulevard signage and pavement markings, green bike boxes. **Anticipated Construction – Fall 2016**

20th Street Streetscape

Armour Boulevard Bikeways

- From Southwest Boulevard to Grand, adding buffered bike lanes, green bike boxes, improved crosswalks, and pedestrian amenities.
- Anticipated Construction Start – Spring 2016

- 3 miles of on-street bikeways from Broadway to Paseo. Currently in design, then public meeting planned for early Spring 2016.
- Anticipated Construction – Fall 2016

# Projects for Design

## Lexington/Gladstone Bikeways

- 7.4 miles of on-street bikeways connecting Independence Boulevard to Indian Mound via Woodland, Lexington, St. John, and Gladstone.
- Anticipated Design RFQ – April 2016

## Paseo Boulevard Bikeways

- 19 miles of on-street bikeways from Independence Boulevard to 85<sup>th</sup> Street.
- Anticipated Design RFQ – April 2016

## Charlotte/Holmes Bikeways

- Construct 2.8 miles of a 6.2 mile bikeway corridor filling in gaps north of Truman Road and south from 25<sup>th</sup> to 36<sup>th</sup> Street.
- Anticipated Design RFQ – April 2017



# Trail Projects

## District 1

- Big Shoal Creek – Chouteau to Jackson
- Lakewood Greenway
- Route 152 – NW Angolia to Maplewoods Pkwy
- Searcy Creek – Parvin Rd to NE 48<sup>th</sup> St
- Shoal Creek – Happy Rock Park (Gladstone) to N. Brighton (KCMO)

## District 2

- KCI Corridor – Segment 2 Along I-29 from Tiffany Spring Road to Tiffany Spring Pkwy
- Route 152 – Segment 2, 3, 4, 8, 9 (Amity to Childress Park, Amity to Congress, Congress to Old Tiffany Springs Pkwy, Line Creek Pkwy to Platte Purchase Dr., & Platte Purchase to US-169)

## District 3

- Blue River – Stadium Drive to Truman Road
- Blue River – Brush Creek to Stadium
- Brush Creek & Blue River Confluence – Bridge

## District 4

- Vivion Road – I-29 west to City limits
- Missouri River Levee Trail – Olive to Chouteau

## District 5

- Little Blue Trace – South Bridge
- Blue River – Connector at Swope Park
- 3 Trails Corridor – I-435 Bike/Pedestrian Bridge to new Police Headquarter
- Trolley Trail – Troost to Woodland

## District 6

- No active projects

# Program Update

Share the  
Road  
Safety  
Education  
Campaign

- Fall 2016
- Contract with O'Neil Event Management to develop a fall campaign about being visible at night

Bike KC  
Master  
Plan

- **Bikeway Design Toolkit**
- Draft plan going out to steering and technical committee 3/1
- Primarily a design tool for staff use with adoption of bikeway design best practices, recommendations, and performance measures

Bikeway  
Map

- Summer 2016
- Update and print 20,000 copies

BikeShare  
KC

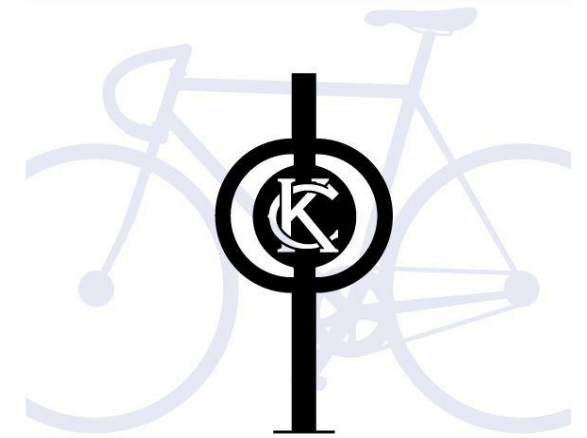
- 10 new stations planned for August 2016; River Market to Waldo

## Trail Emergency Access/Mileage Markers



- Installed on Indian Creek, Blue River and Line Creek Trails.
- KCATA has agreed to install on Trolley Trail as funding is available.

## Bicycle Racks



Public Works will install 100 new bike racks Downtown, Old Northeast, Westport, 39<sup>th</sup> Street, Brookside, Zona Rosa

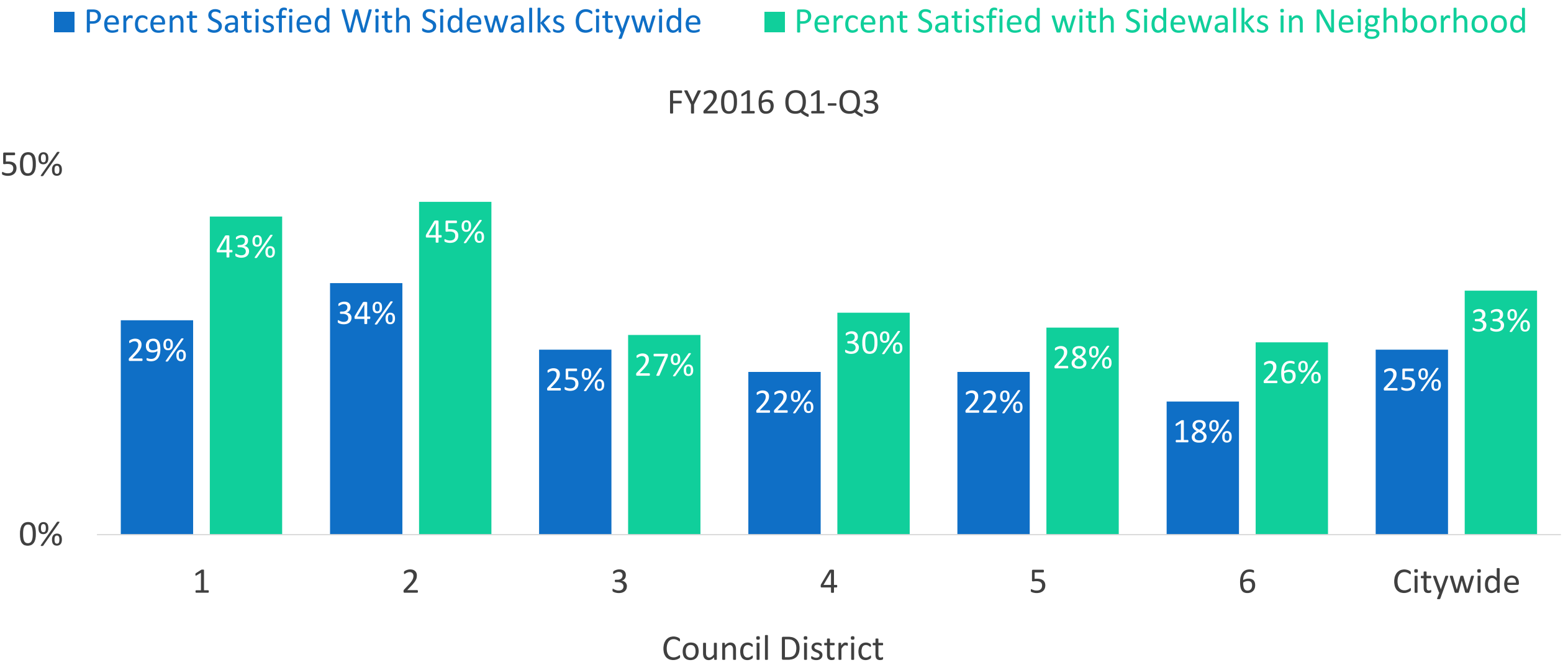
Streetcar

KCATA

Active  
Transportation

Sidewalks

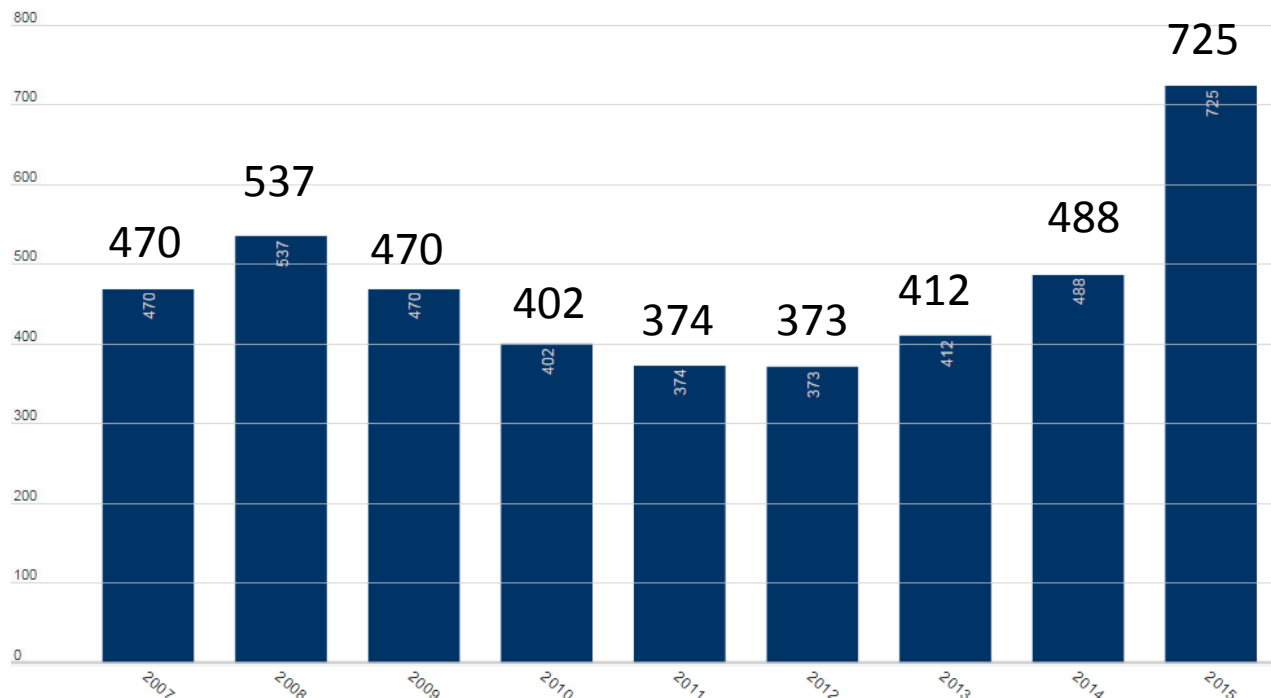
# Citizen Satisfaction with Sidewalks By Council District



Source: Citizen Survey 2005 to FY2016 YTD

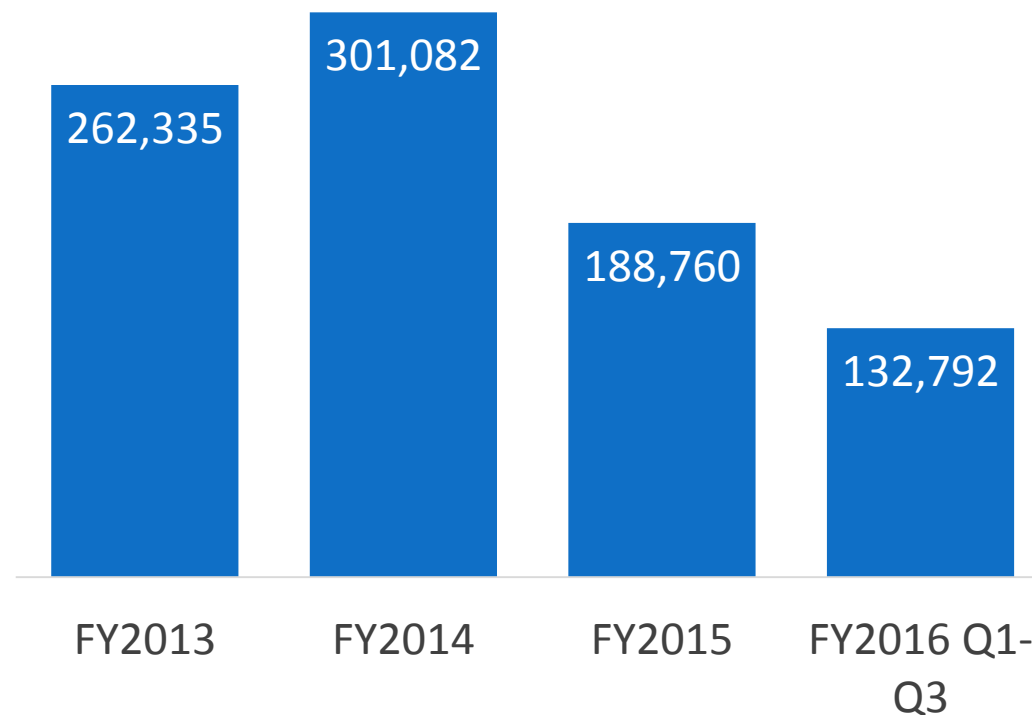
# Sidewalk Repair: Supply and Demand

311 Requests for Sidewalk Repair



Sidewalks Constructed (Square Feet)

including spot sidewalk repairs and sidewalk replaced as part of PIAC block projects



City Code 64-243 holds property owners responsible for the curbs, sidewalks and drive approaches abutting their property. Methods by which repair can occur: 1. Property owners may obtain a permit and make the repairs themselves or hire a contractor; 2. Citywide Repair Projects; 3. PIAC Process; 4. Petition projects (previously available in Council District 4 and 6)

## Strategic Asset Investment

26

Percent of Citizens  
Satisfied with Street  
Maintenance



needs improvement

Detail >

# Strategic Asset Investment

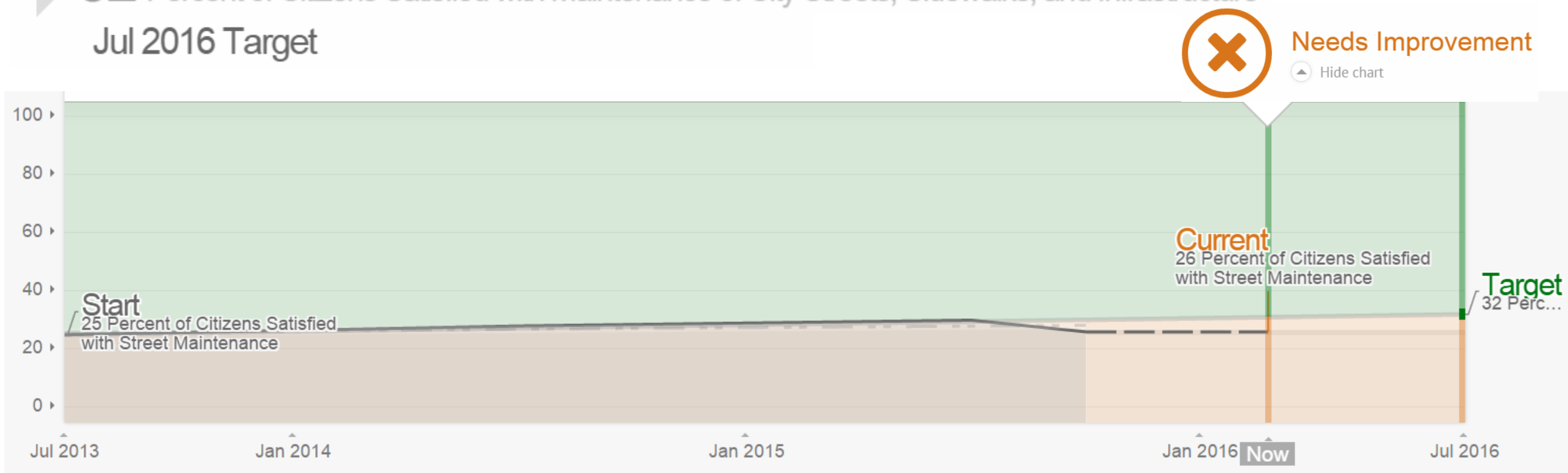
# Objective 1

Develop asset-specific plans to maintain City infrastructure to maximize useful life. (June 2017)

# Citizen Satisfaction with Streets & Infrastructure

**26** Percent of Citizens Satisfied with Maintenance of City Streets, Sidewalks, and Infrastructure  
Current as of Oct 2015

▶ **32** Percent of Citizens Satisfied with Maintenance of City Streets, Sidewalks, and Infrastructure  
Jul 2016 Target





# Citizen Satisfaction Importance – Satisfaction Matrix

Service	FY2016 I-S YTD
Maintenance of streets/sidewalks/other infrastructure	1
Quality of neighborhood services	2
Quality of public transportation	3
Quality of police services	4
Stormwater management system	5
Quality of water utilities	6
Parks & recreation programs/facilities	7
Effectiveness of communication with the public	8
Quality of solid waste services	9
Customer service from city employees	10
Quality of fire/ambulance services	11
Quality of airport facilities	12
Quality of Health Department services	13
Municipal court services	14
Quality of 311 services	15

Streets

Bridges

Boulevards/  
Parkways

Trees

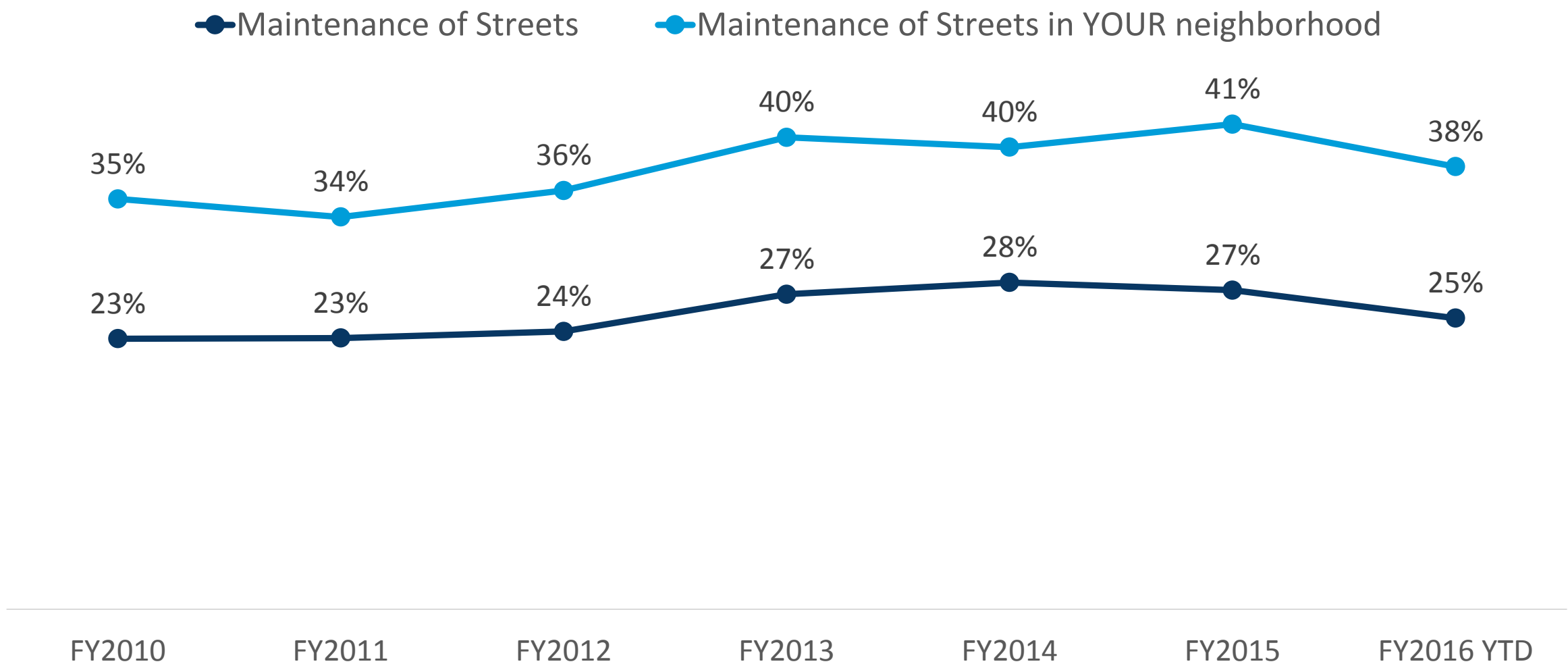
Streetlights

Traffic  
Signals

Street Signs

# Citizen Satisfaction with Streets

Street maintenance is the #1 area of emphasis in the Infrastructure section of the citizen survey



# Asset Inventory: Pavement Condition Index (PCI)

The [Pavement Condition Index \(PCI\)](#) is a crucial measurement of physical condition of streets that can be used to measure infrastructure health over time as well as develop a targeted plan for capital maintenance



**Contractor has  
driven the streets  
& gathered  
pavement  
distress data**

**Data will be used  
to produce  
pavement  
condition rating for  
all streets**

**Streets will be  
reassessed every 3  
years; data may also be  
used to create ratings  
of other infrastructure  
assets**

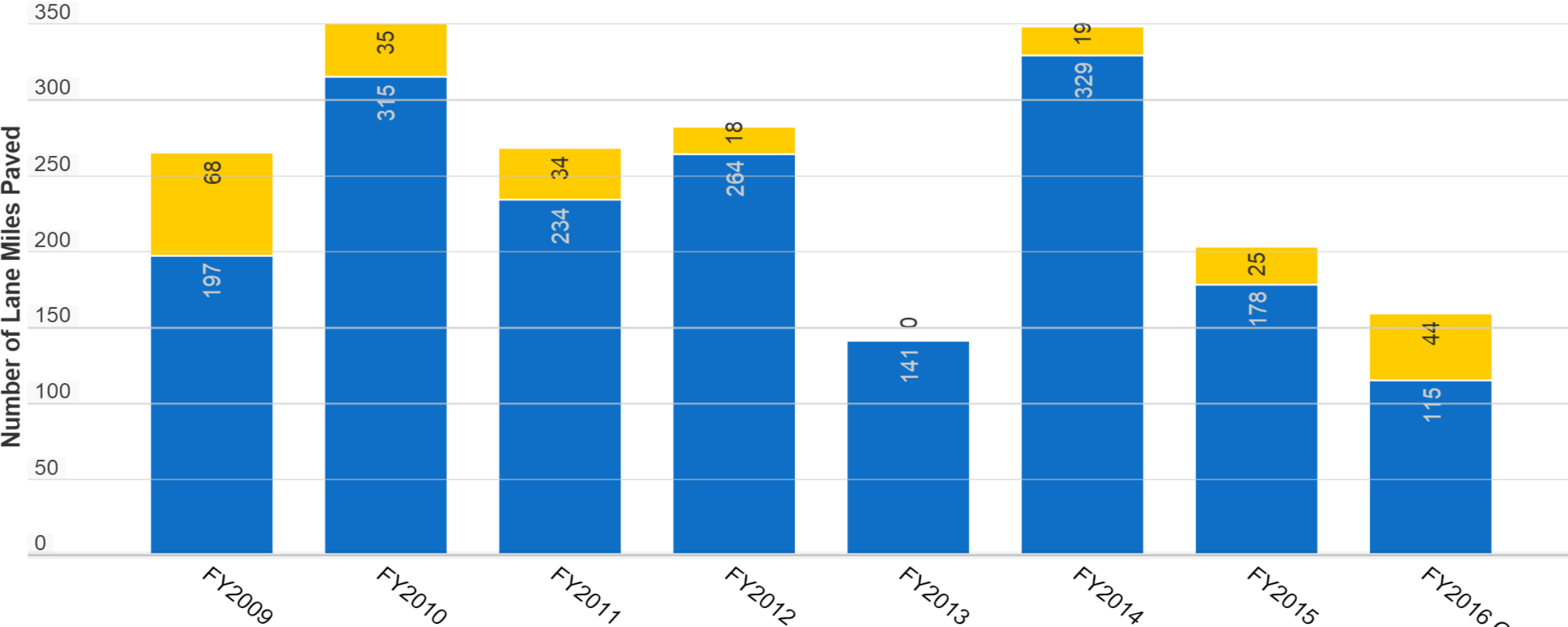
# Pavement Management Tools

- Cold mill & overlay
- Slurry seal and micro-surfacing
- Crack & joint sealing
- Asphalt rejuvenation
- Concrete inlays
- Pavement patching
- Reconstruction



# Lane Miles Paved & Slurry Sealed

Resurfacing Lane Miles      Slurry Seal Lane Miles



Streets

Bridges

Boulevards/  
Parkways

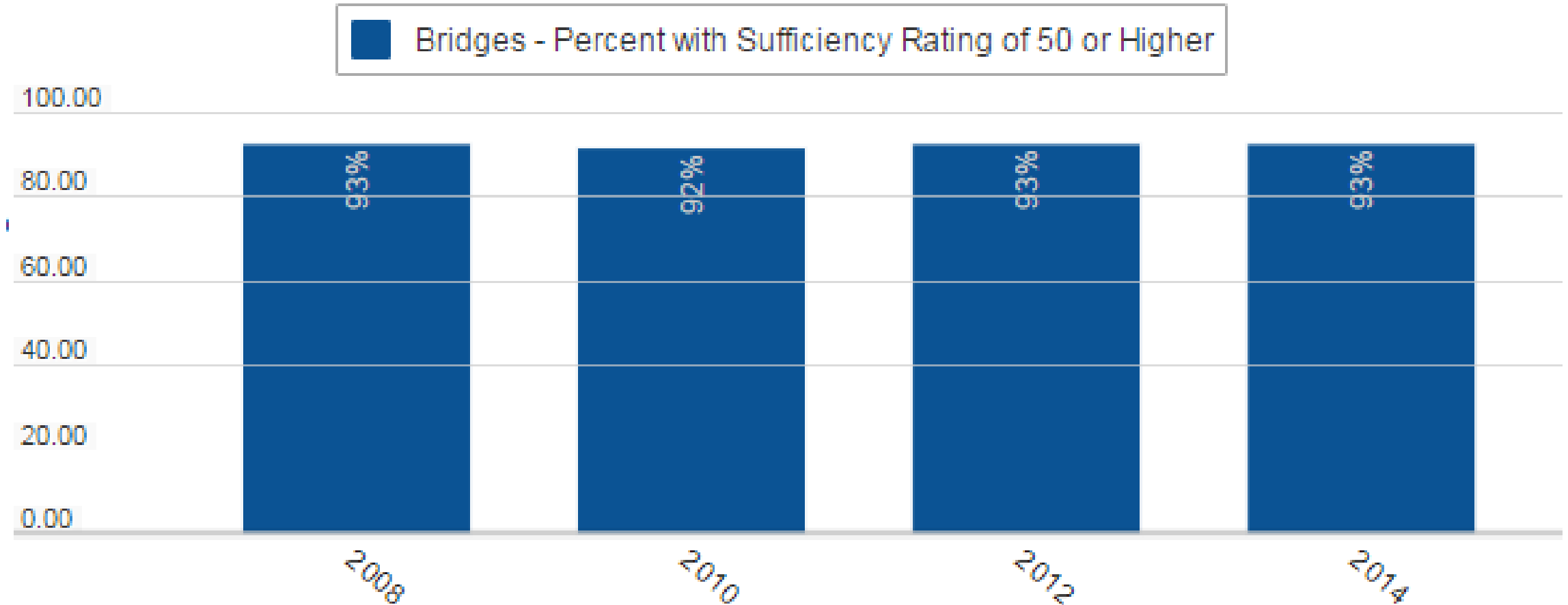
Trees

Streetlights

Traffic  
Signals

Street Signs

# Asset Inventory: Bridge Sufficiency Rating





Streets

Bridges

Boulevards/  
Parkways

Trees

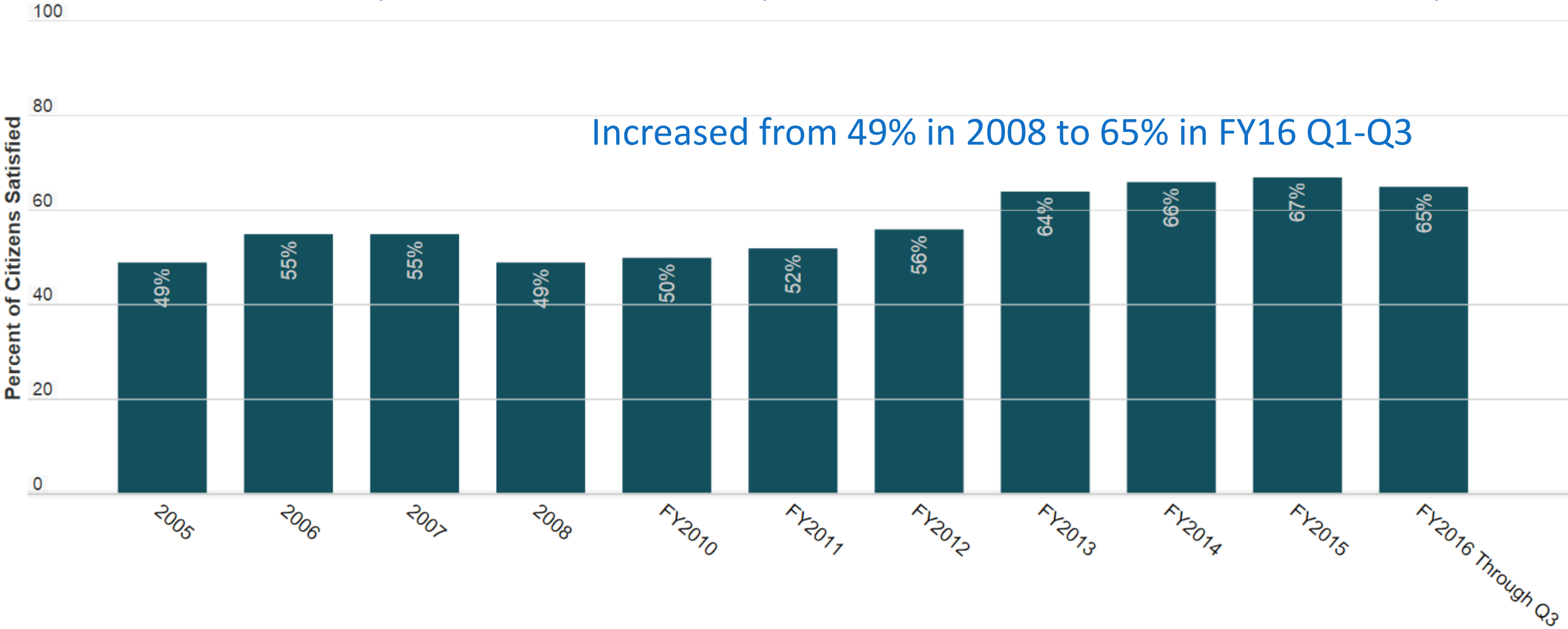
Streetlights

Traffic  
Signals

Street Signs

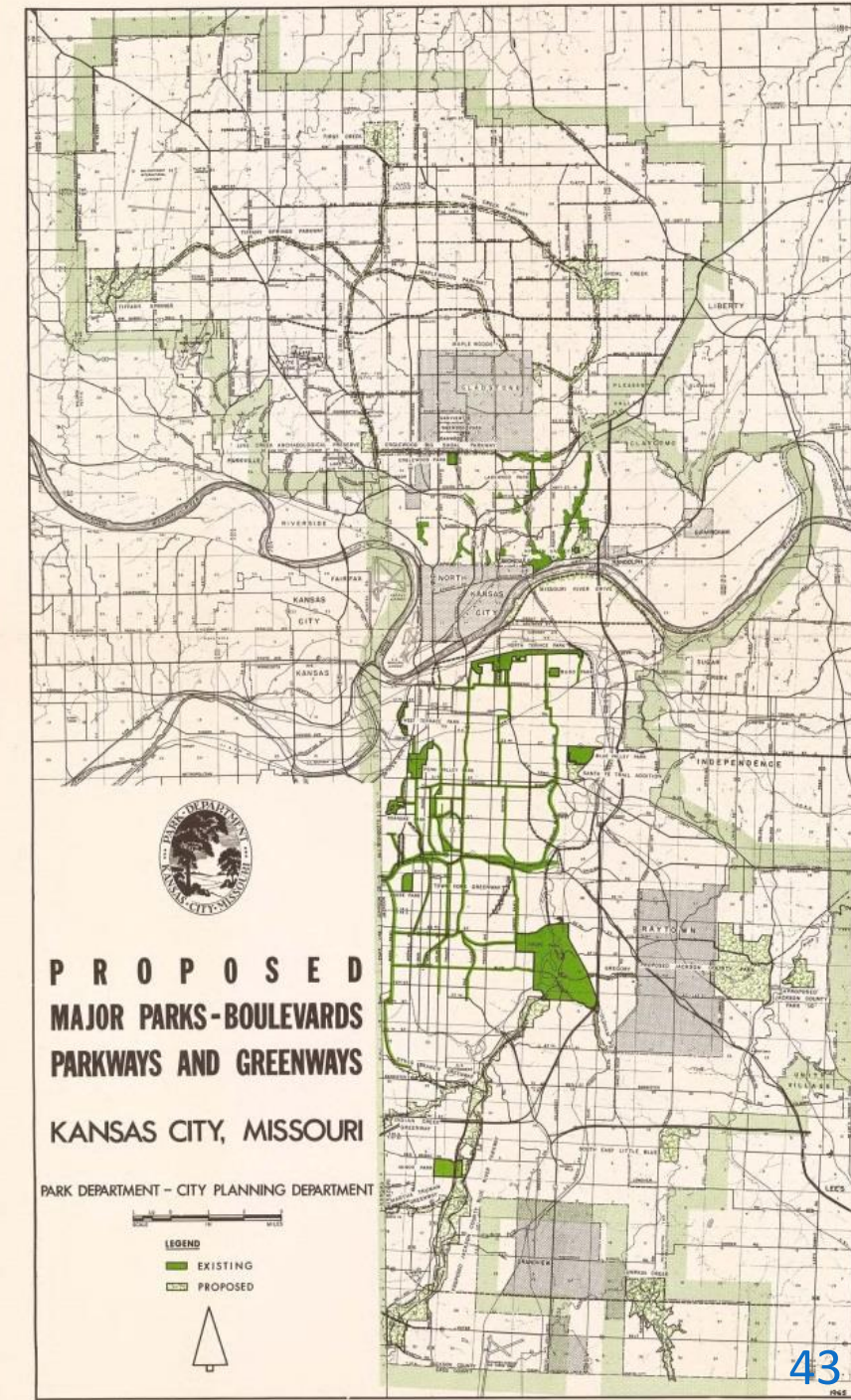
# Citizen Satisfaction with Boulevards and Parkways

Boulevard/Parkway Maintenance is the #5 area of emphasis in the Parks and Recreation section of the citizen survey



# Boulevard/Parkway Updates

- The Kansas City, Missouri Parks & Boulevards District nomination as a National Historic Landmark has been signed off by the Missouri Advisory Council & is under review by the National Parks Service (NPS).
- Only two other National Historic Landmarks in KCMO are the Liberty Memorial & the Mutual Musicians Foundation



Streets

Bridges

Boulevards/  
Parkways

Trees

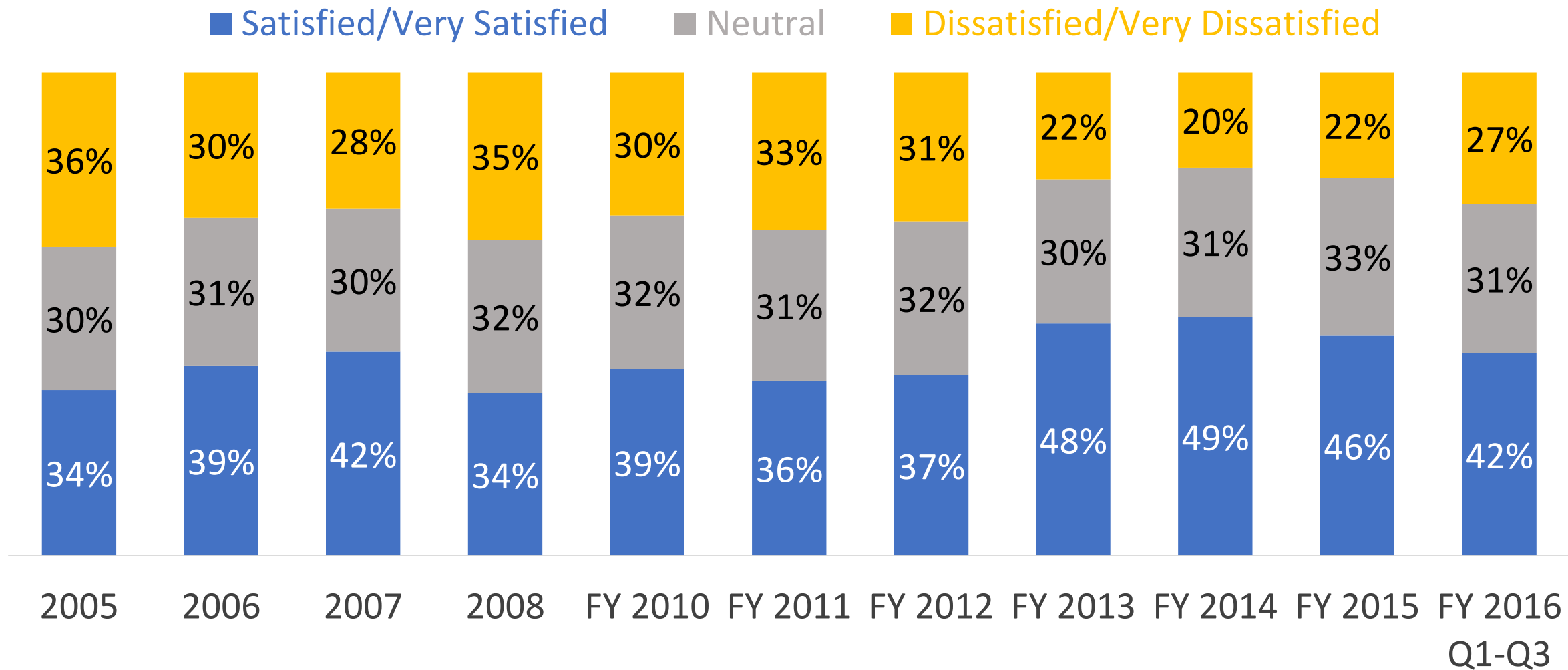
Streetlights

Traffic  
Signals

Street Signs

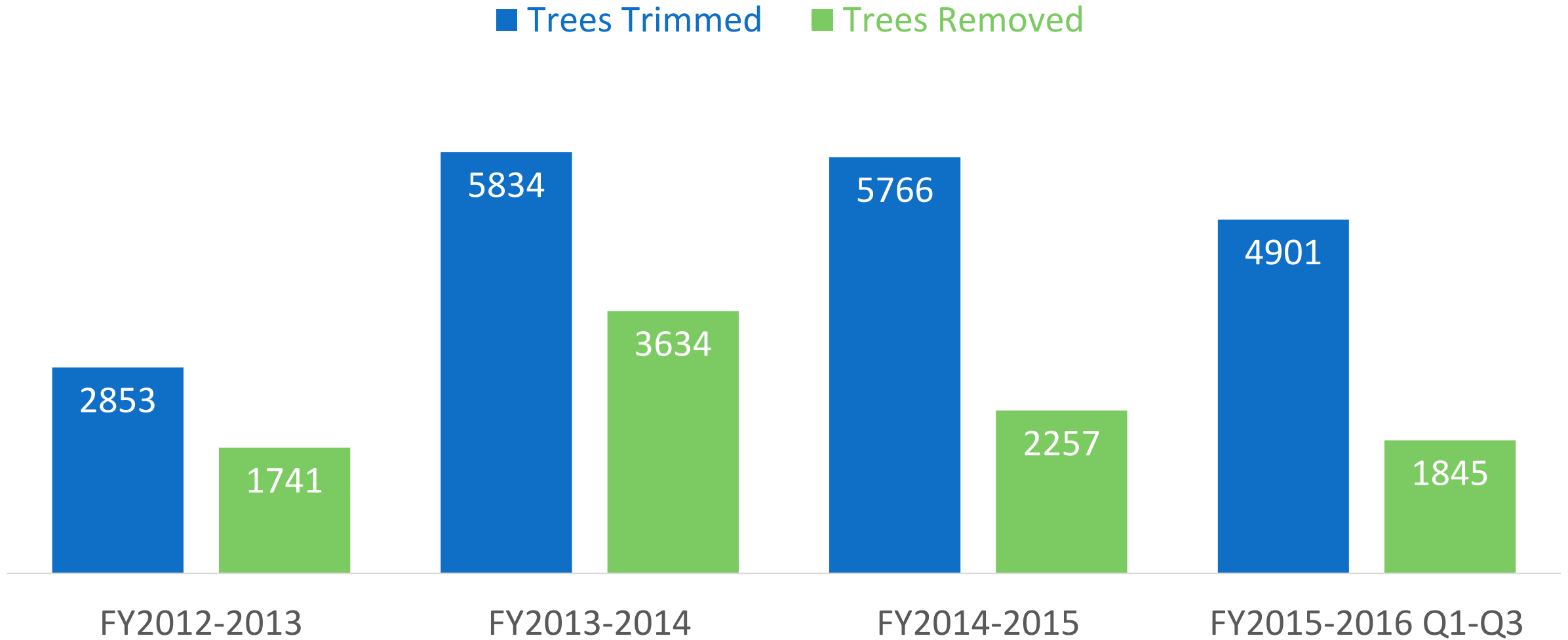
# Citizen Satisfaction with Tree Trimming and Care

Tree Trimming and Care is the #1 area of emphasis in the Parks and Recreation section of the citizen survey



Source: Citizen Survey

# Trees Trimmed & Removed



Streets

Bridges

Boulevards/  
Parkways

Trees

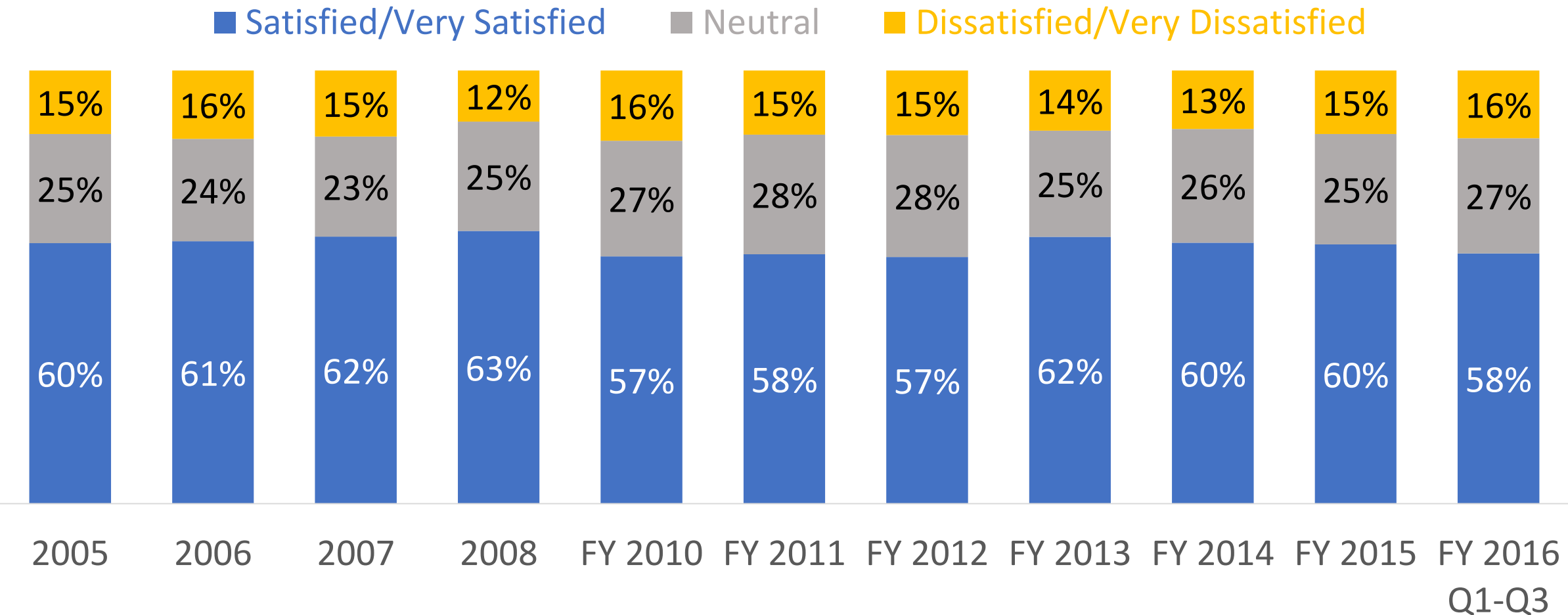
Streetlights

Traffic  
Signals

Street Signs

# Citizen Satisfaction with Streetlights

Adequacy of street lighting is the 9<sup>th</sup> highest area of emphasis in the Infrastructure and Transportation section of the citizen survey





Streets

Bridges

Boulevards/  
Parkways

Trees

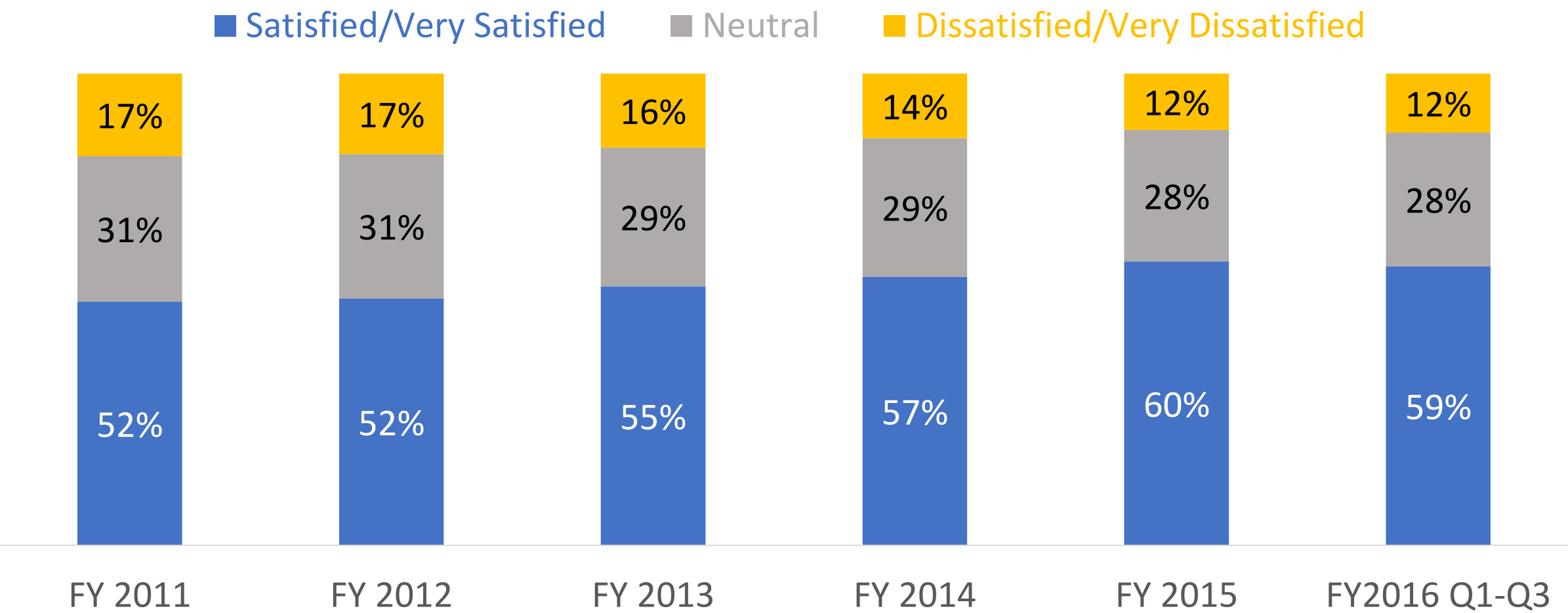
Streetlights

Traffic  
Signals

Street Signs

# Citizen Satisfaction With Street Signs/Traffic Signals

Street signs/traffic signals is the 10<sup>th</sup> highest area of emphasis in the Infrastructure and Transportation section of the citizen survey



# Signal Inventory and Projects

Type of Signal	Number in KCMO
Traffic Signals	599
Pedestrian Hybrid Beacons	14
Mid block Beacons	18
School Flashers	100
<i>Total</i>	731

## Traffic Signal Projects 2011-2015

47

Traffic signal upgrade projects

4

Traffic signal fiber optic interconnect projects

# Communication: Public Works

## SIGNS AND SIGNALS



with Your Host  
*Petrina Parker*



THESE SERVICES AND  
MORE BROUGHT TO YOU BY  
**PUBLIC  
WORKS**

## TRAFFIC ENGINEERING



with Your Host  
*Petrina Parker*



THESE SERVICES AND  
MORE BROUGHT TO YOU BY  
**PUBLIC  
WORKS**

## CURBSIDE TRASH PICKUP



with Your Host  
*Petrina Parker*



THESE SERVICES AND  
MORE BROUGHT TO YOU BY  
**PUBLIC  
WORKS**



## Objective 9

Implement an American with Disabilities Act (ADA) Plan to meet the Department of Justice's requirements.  
(Ongoing)

Assessments  
and Transition  
Plan

Curb ramps

Communication

# Assessments Process



KC Parks & Recreation



Convention & Entertainment Facilities



KC Water Services



General Services Department



Health Department



Aviation Department

# Transition Plan Update

- **Evaluated and assessed City facilities** to complete the DISCOVER phase for specific projects through coordination with facility managers and completed.
- **Validated the DOJ findings** and facility scopes of work.
- **Created evaluation matrix** with accessibility requirements, non-conforming item details, recommended solutions, and guidelines referenced.
- **Supported data** with location plans and photographs.
- Established appropriate / **developed recommended solution for each deficiency** within City's facilities (provided alternate solutions as appropriate).
- **Completed cost assessment** and budget review.
- Developed clear methodology to gather information, established comprehensive process of evaluation, and **developed a system of reporting** using the MySmartPlans project-tracking dashboard.



# Project Updates



Completed June 2015

Also completed:

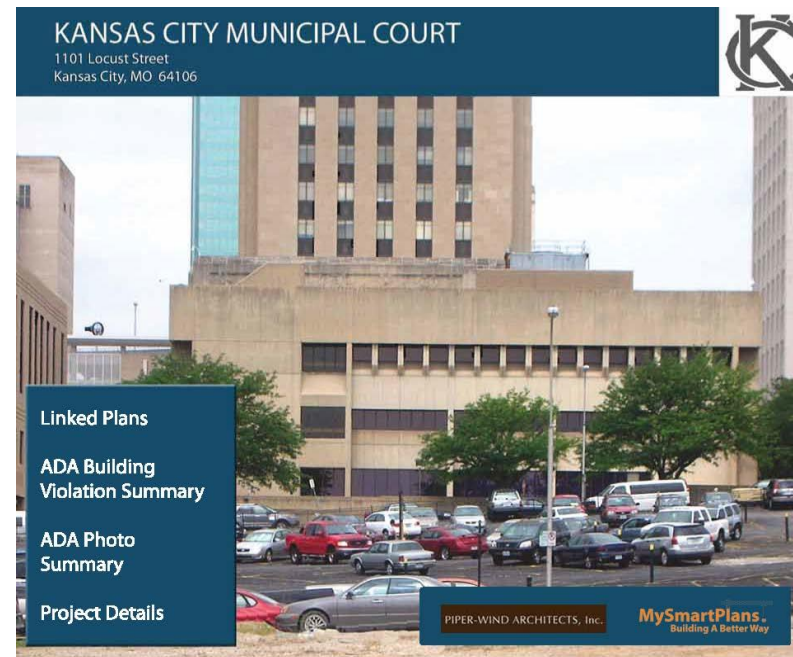
- Swope Ridge Geriatric Center Courtyard
- Health Department Parking Lot



Near Completion: May 2016

Also near completion in April/May:

- Parks Golf Courses
- Shoal Creek Living History Museum
- Southeast Community Center
- Lakeside Nature Center
- Parks Administration Building
- Regional Police Academy



Near Completion: June 2016

Also near completion in June/July:

- Communications Center
- 4900 Swope Parkway
- Municipal Service Center
- Hillcrest, KC North, Tony Aguirre, and Brush Creek Community Centers
- Health Department
- Mohart Center

Assessments  
and Transition  
Plan

Curb ramps

Communication

# State of Curb Ramps in KCMO

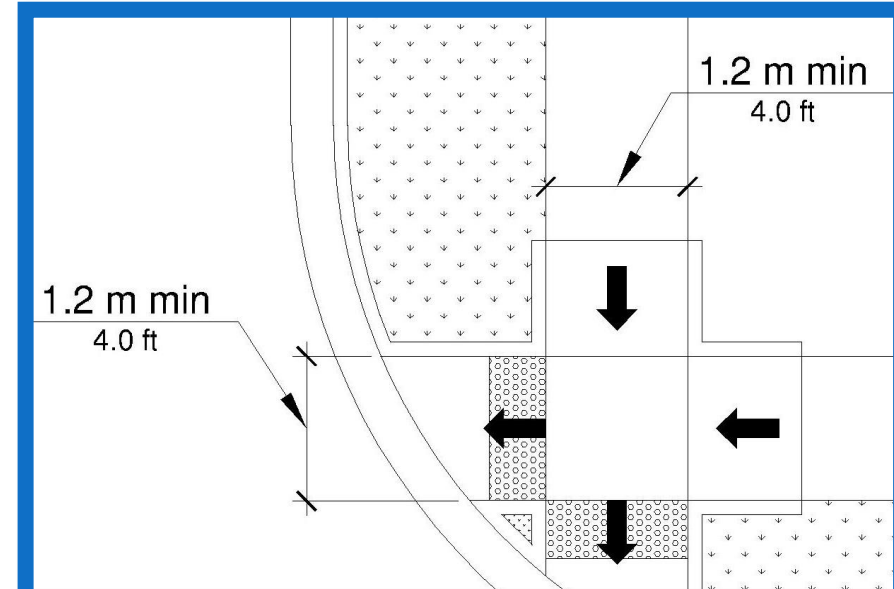
21,750 – Number of corners with sidewalks leading to them

2,400 – Approximately how many corners are not ramped

\$4,500 – The average cost to install a curb ramp

\$10.8M – Estimated cost to reconstruct un-ramped corners

\$2.5M – Estimated annual cost to maintain curb ramps



Assessments  
and Transition  
Plan

Curb ramps

Communication



# Communication on ADA

- Temporary Signage including Banners, Posters, Sandwich Boards, Window Clings and Yard Signs
- Progress Boards
- Custom Eblasts
- Printed & Digital Materials
  - Fact Sheets & Handouts
  - Reports & Presentations



## Objective 10

Facilitate the development & use of facilities, venues, & spaces for diverse arts activity throughout the City. (Ongoing)

# One Percent for Art

- 30 year program
- Appraised at \$19,445,000
  - + \$887,000 in new art
  - = \$20,332,000 in value
  - Almost doubled in value from the original project budget
- Condition:
  - 2% - Excellent
  - 84% - Good
  - 14% - Fair
- Comprehensive Assessment with a five year maintenance plan to maintain condition

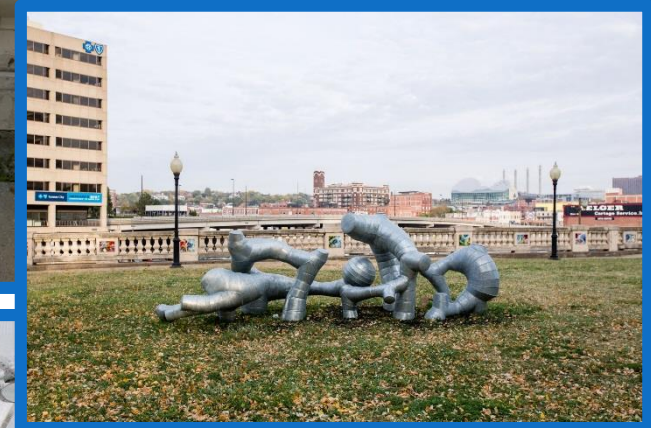
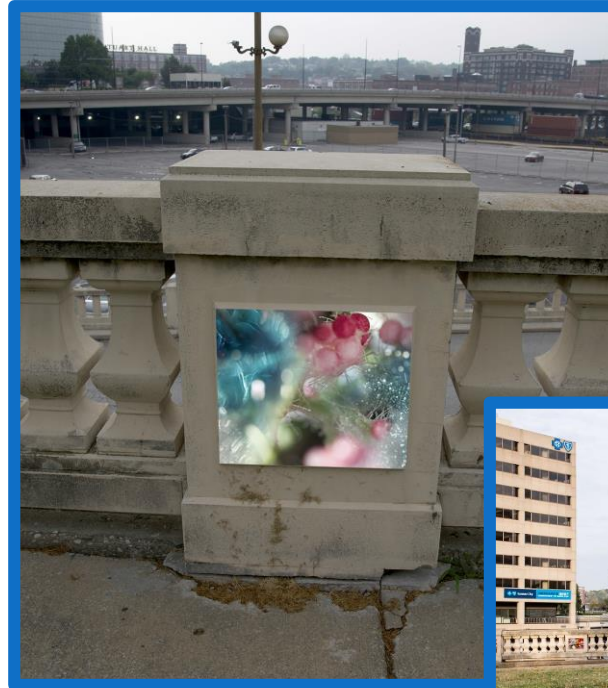
- 43 pieces in collection
  - 9 from local artists (21%)
  - Three new art projects soon – North Patrol, Municipal Court and Urban Youth Academy





# Washington Square Park Temporary Artworks

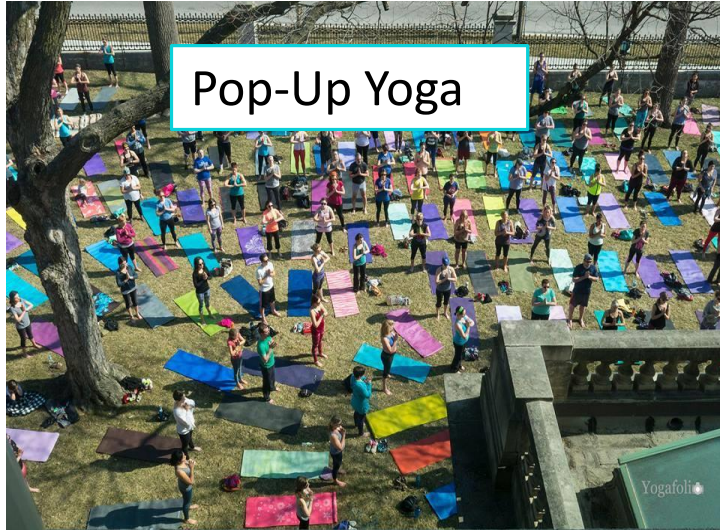
- Five local artists given opportunity to experiment in public art
  - Grooming artists for future percent opportunities
  - Building their portfolios
  - Learning the complex nature of public art – working with engineers, city staff, and in the outdoor environment can have many challenges
- Bring beauty, creativity and awareness to our wonderful park to downtown employees, residents and visitors.
- Open park museum atmosphere brings art to a segment of the public that might not usually attend galleries.
- Illus Davis Park, four temporary artists, four performance artists at noon (food trucks), collaborating with Art in the Loop





# KC Museum

## Recent Events



Pop-Up Yoga

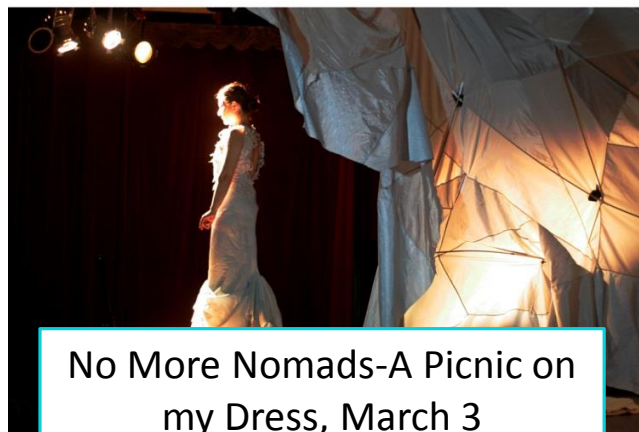


Dia de los Muertos



The Fairy Princess

## Upcoming Events



No More Nomads-A Picnic on my Dress, March 3



Cultures without Borders March 5



## Water and Sewer Systems

91

Percent of all main breaks repaired and restored in 30 days or less



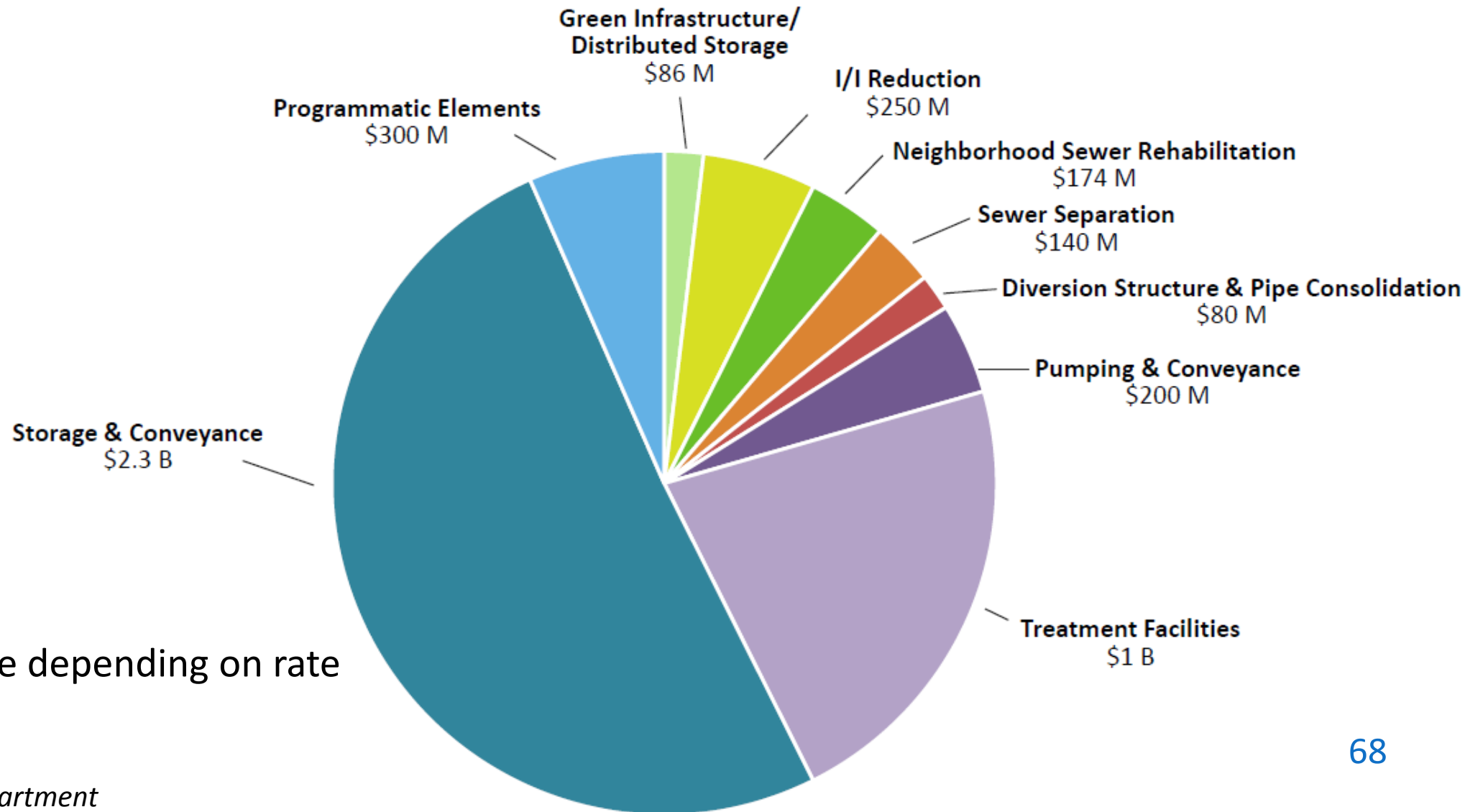
Detail >

# Water & Sewer Systems

## Objective 5

Execute consent decree requirements for the overflow control program (Ongoing)

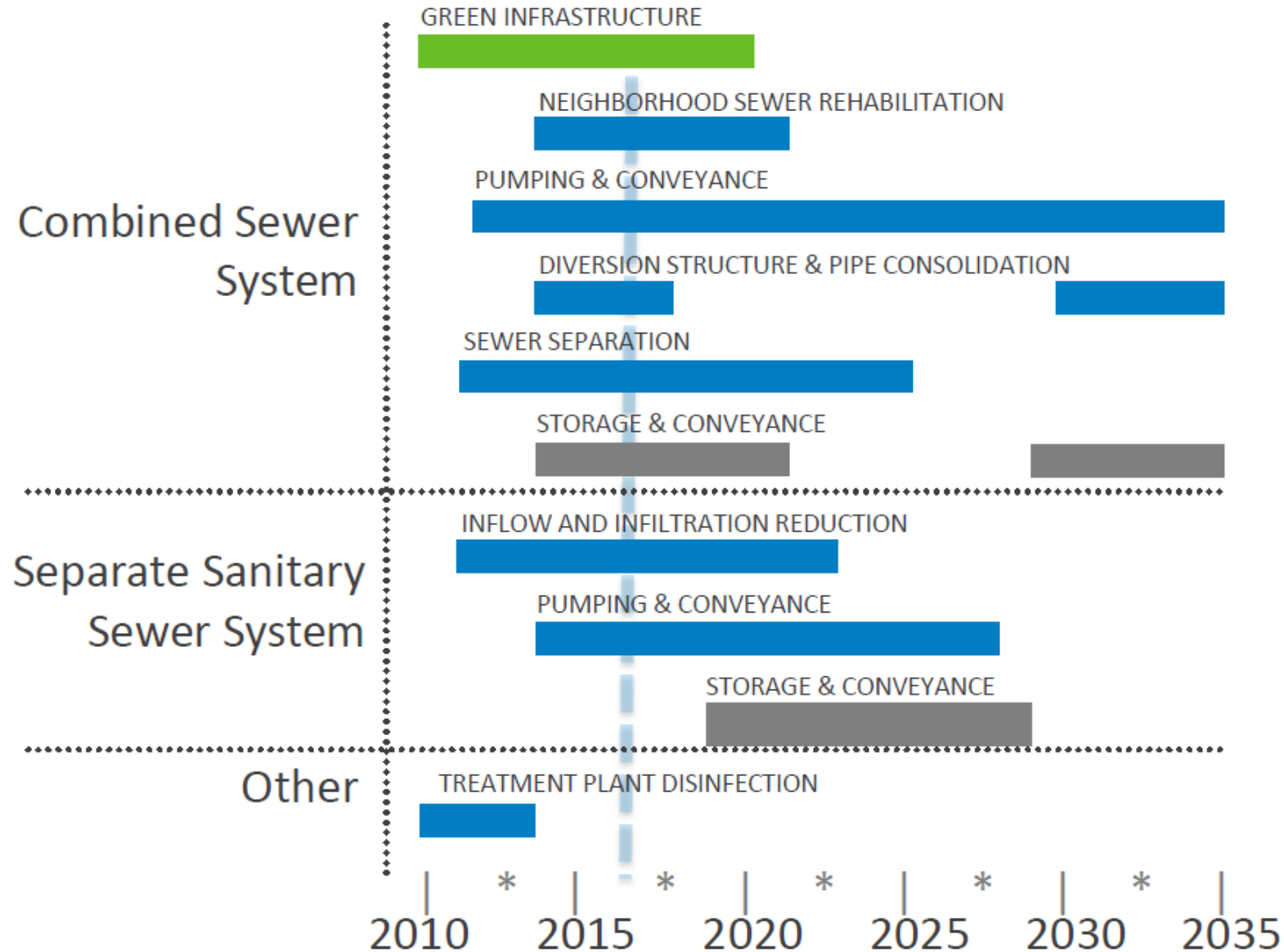
# Overflow Control Budget



○ Cost will fluctuate depending on rate of inflation



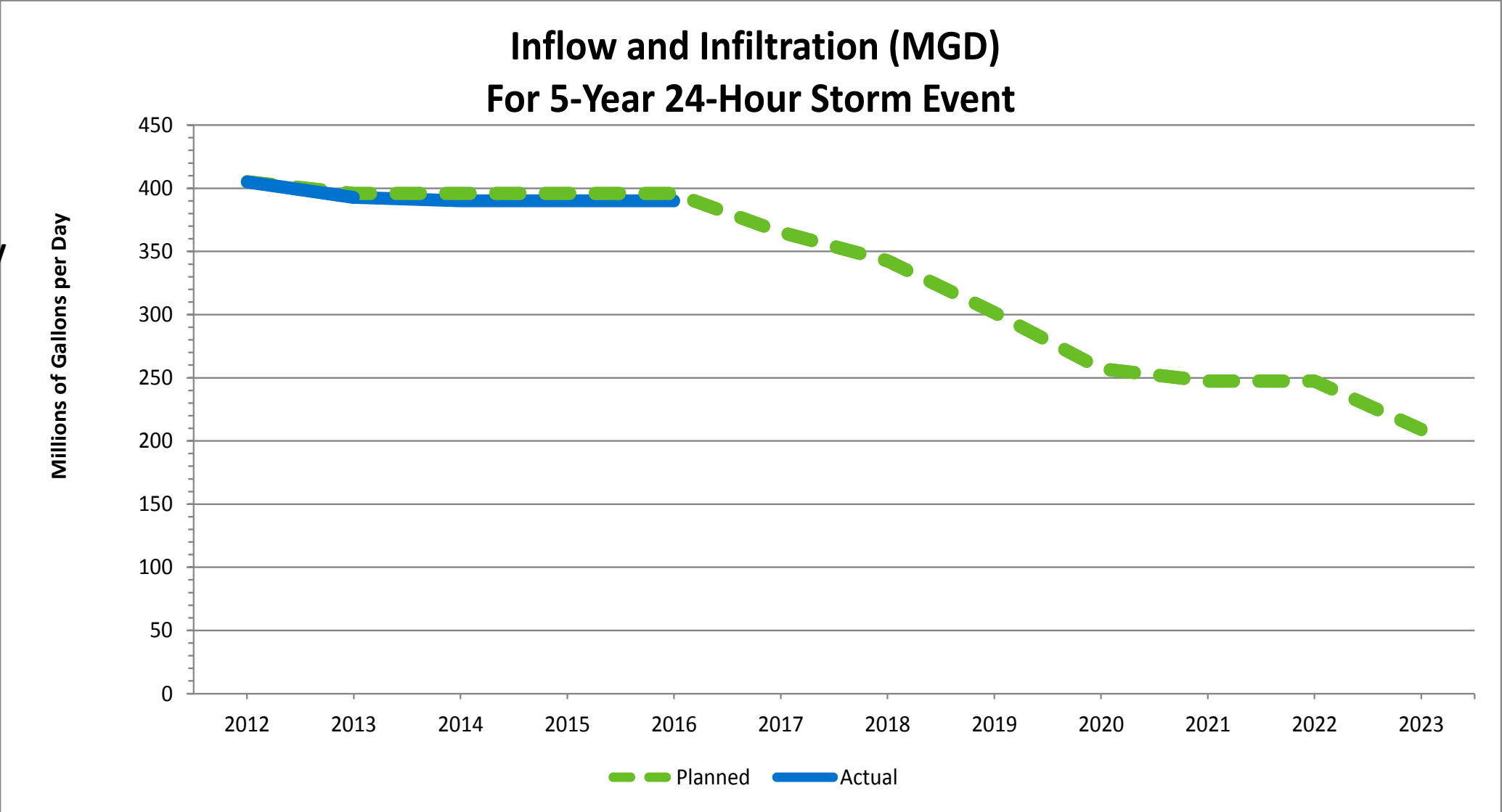
# Overflow Control Program Implementation - Schedule



# Inflow/Infiltration 5-Year, 24-Hour Storm Event

## Completion Dates by Project Area

- South of River
  - 2021
- North of River
  - 2023

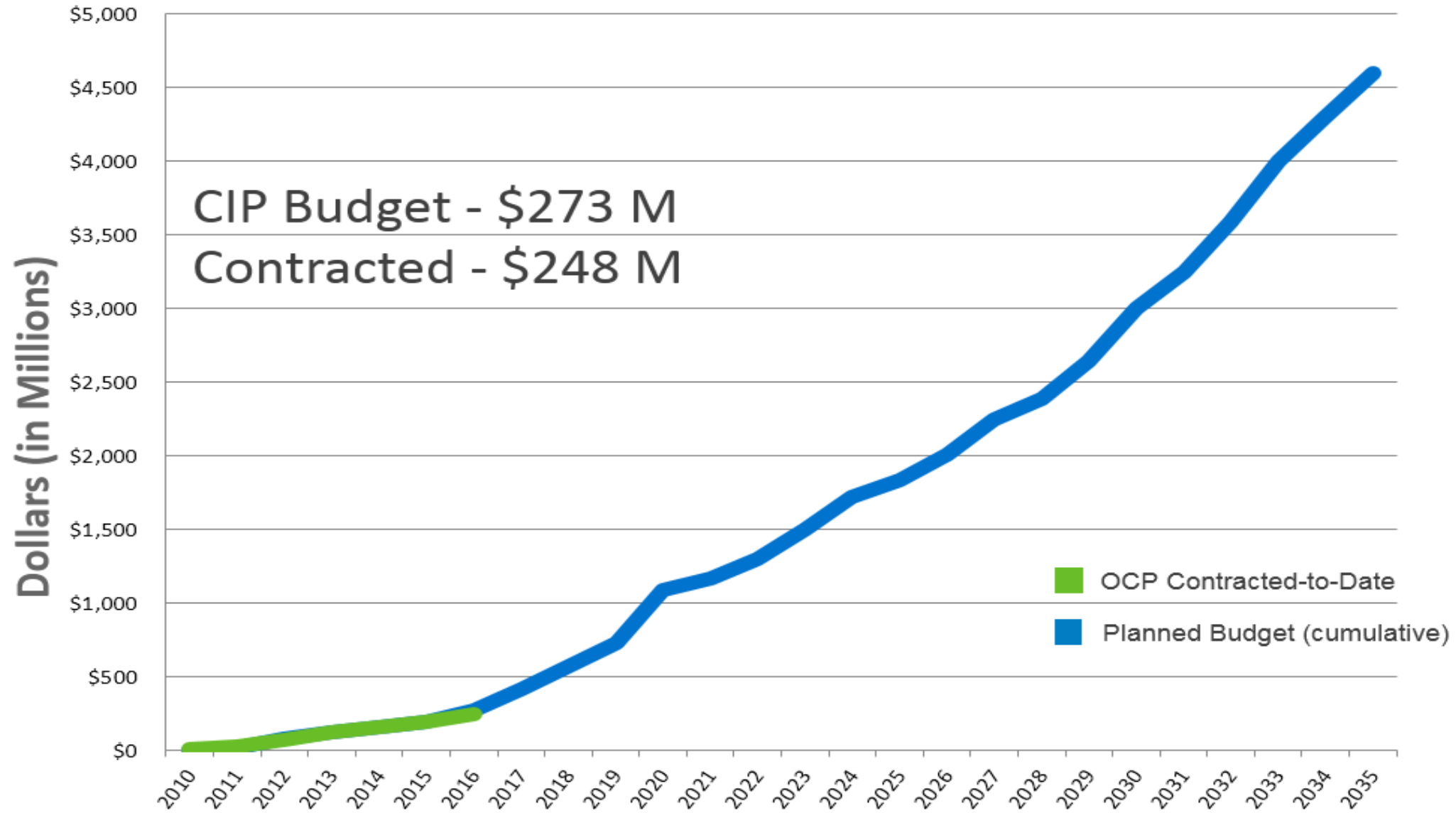




# Overflow Control Program - Active Projects

Project Type	Active Projects	Total Budget Amount	Total Contracted Amount
Green Infrastructure	5	\$11.9 M	\$15.8 M
Inflow/Infiltration Reduction	10	\$18.5 M	\$15.8 M
Neighborhood Sewer Rehabilitation	4	\$26.3 M	\$23.5 M
Sewer Separation	3	\$4.5 M	\$2.4 M
Diversion Structure & Pipe Consolidation	1	\$0.9 M	\$1.2 M
Pumping & Conveyance	3	\$44.2 M	\$39.9 M
Treatment Facilities	0	\$0 M	\$0 M
Storage & Conveyance	3	\$2.5 M	\$1.3 M
<b>TOTAL</b>	<b>29</b>	<b>\$108.8 M</b>	<b>\$99.9 M</b>

# OCP Project Investment: 2010-2035

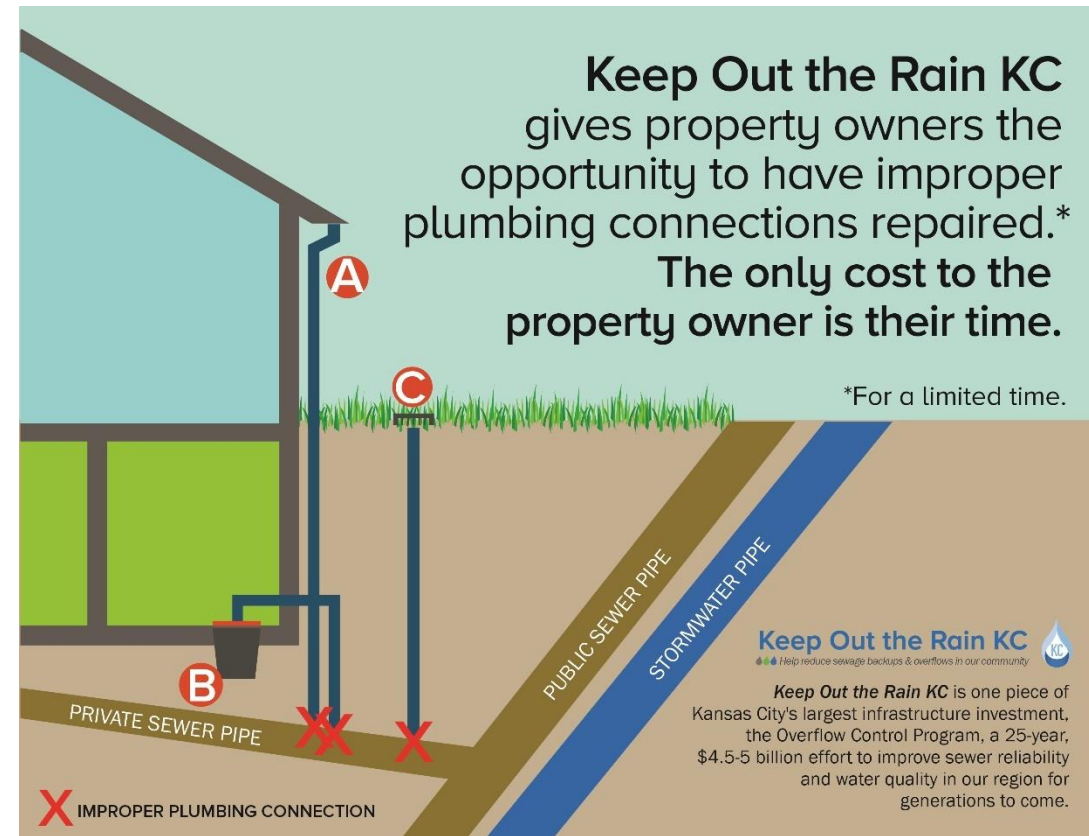
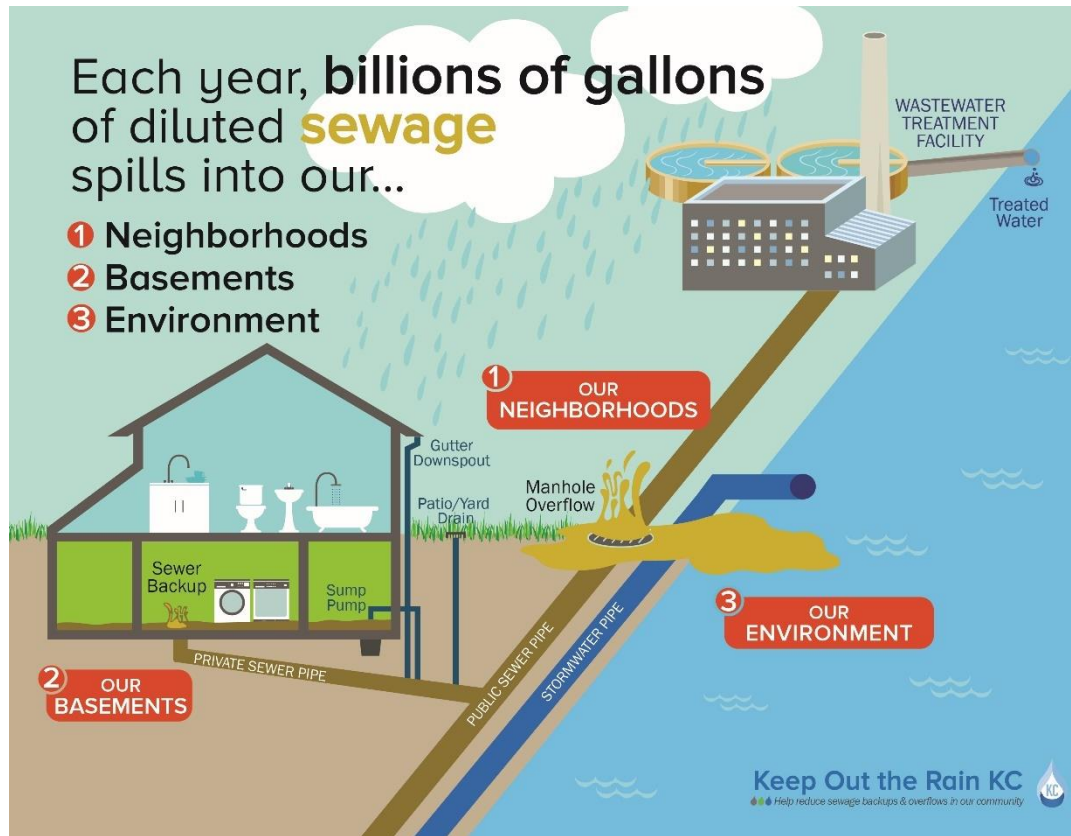


# OCP Public Outreach – Total Reach: 875

TACTIC	FOCUS
OCP Roadshow	Education: overall reach & impact of OCP's investments
Direct Mail Pieces (Newsletter/Postcards)	Meeting invitations & construction updates; internal (WSD) and external newsletters (neighborhood residents)
Public Meetings	To Inform & obtain input: throughout design process, and construction kickoff; address FAQs & provide PM contact info
OCP University	Capacity building for M/WBE design and construction firms
Conferences & Workshops	General public education, green infrastructure best practices
Media Releases & Published Articles	National rankings, construction/progress updates, OCP Program initiatives and innovation
KC Water Website	OCP project page includes Project fact sheets & PM contact info
Social Media	Timely updates, fun facts & consistent hashtags

## Keep Out the Rain KC

Help reduce sewage backups & overflows in our community

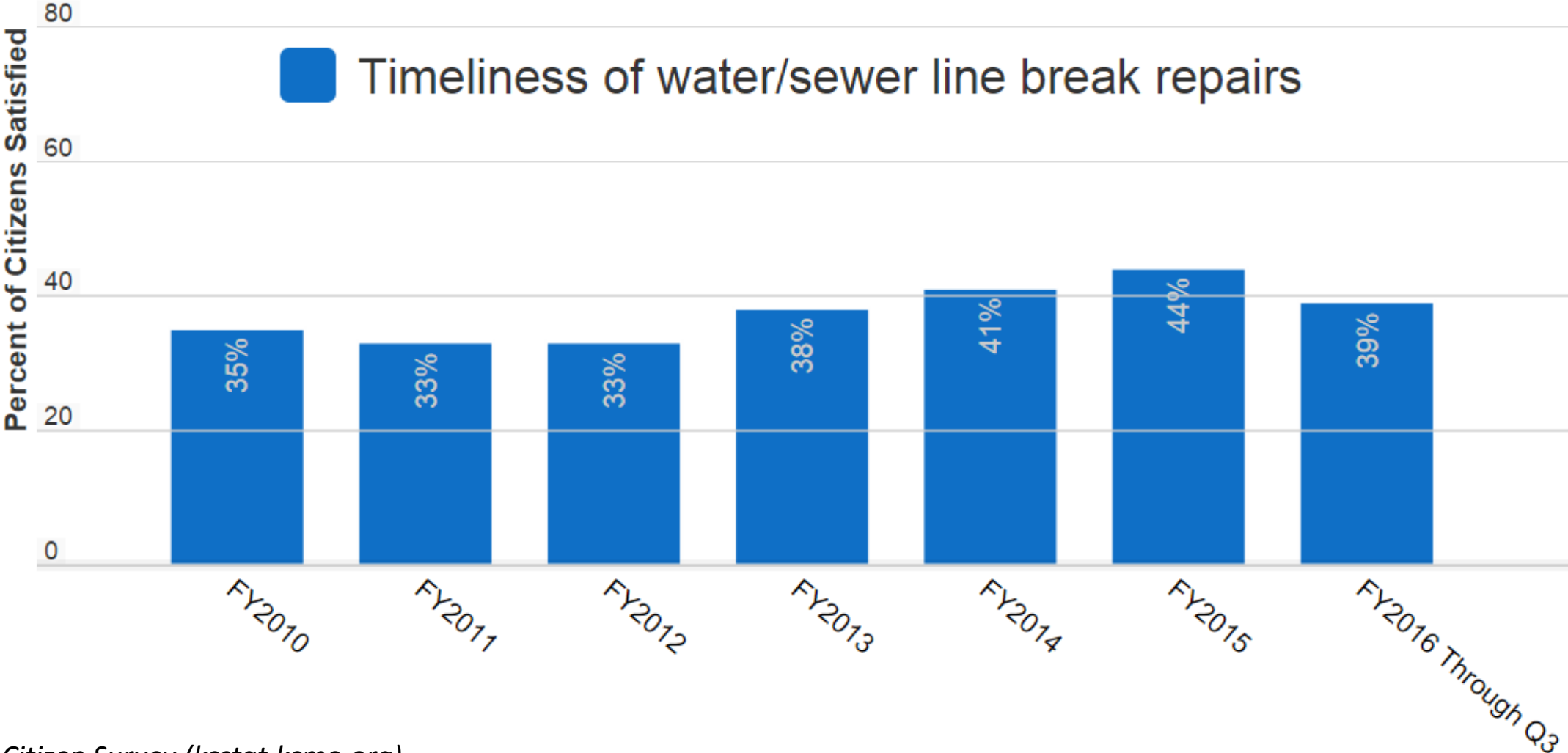


## Objective 8

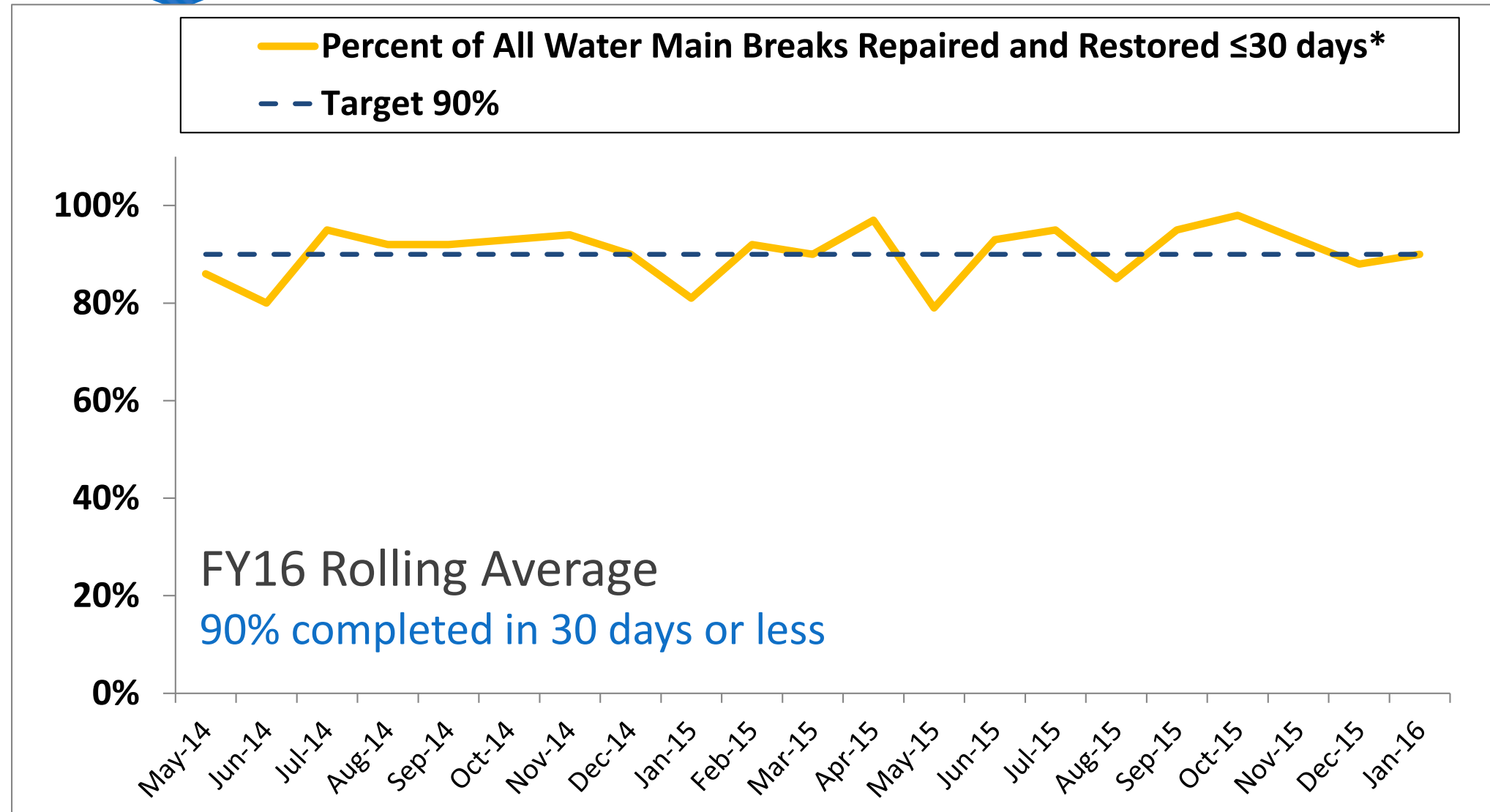
Monitor & maintain the  
timeliness of water main  
repair & restoration.  
(Ongoing)

# Citizen Satisfaction With Timeliness Of Sewer/Water Line Break Repair

Satisfaction has increased from 33% in FY2012 to 39% in FY2016

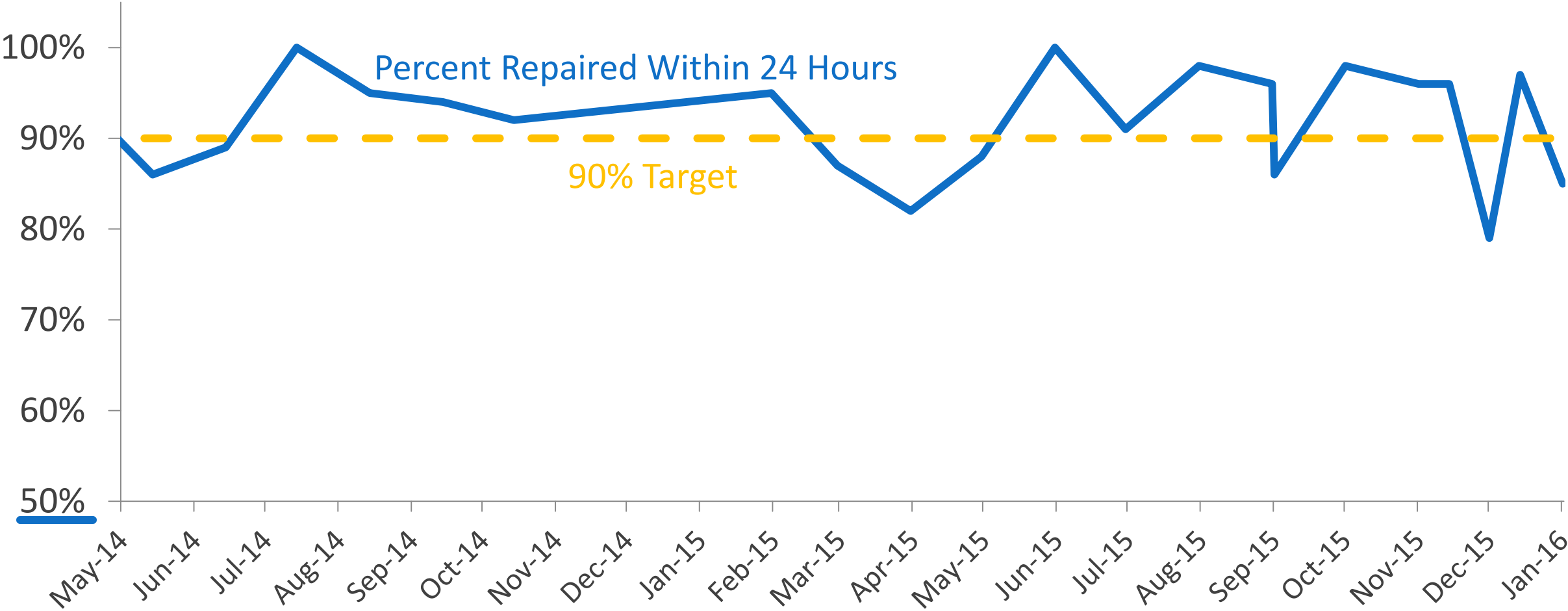


# Timeframes for Water Main Repair + Restoration

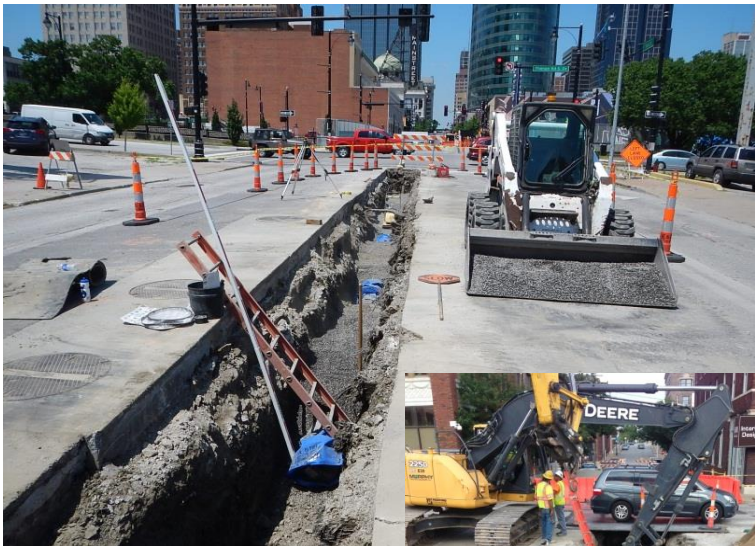




# Percent of Code 3 Water Repairs Made Within 24 Hours

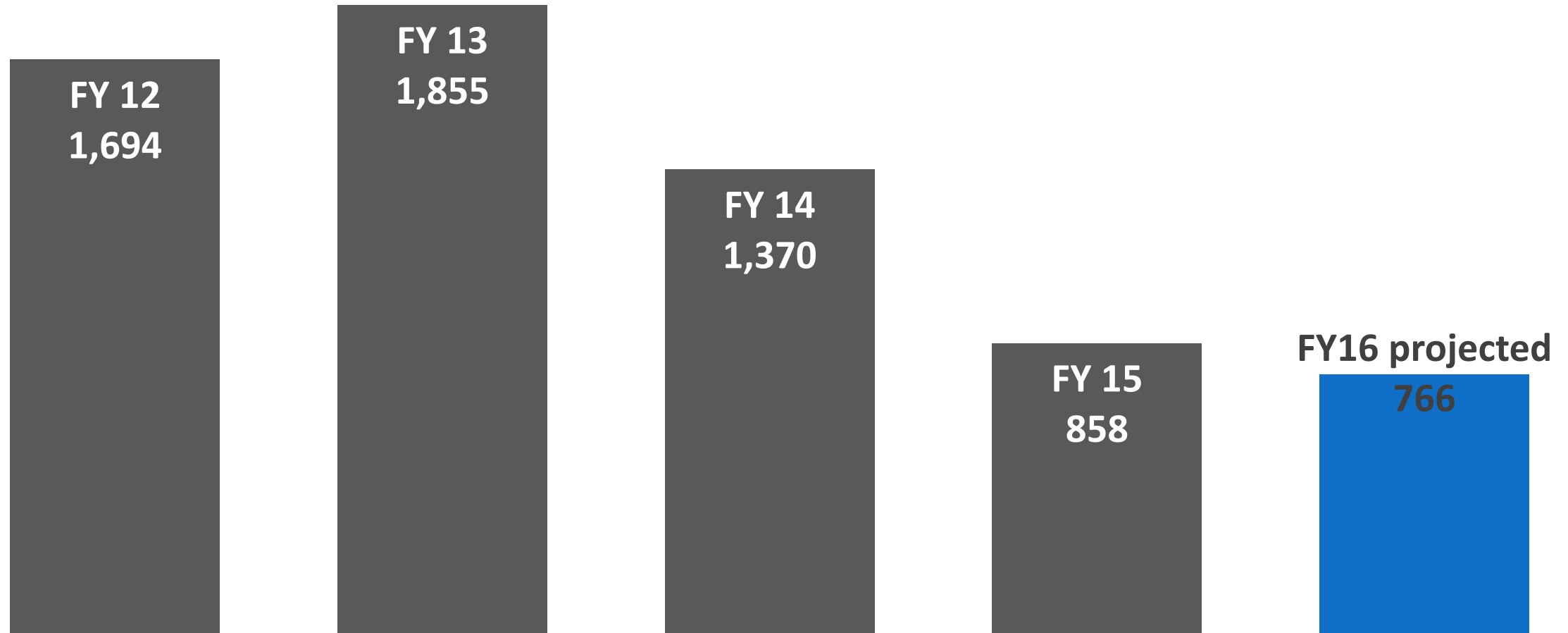


# Citywide Water Main Replacement



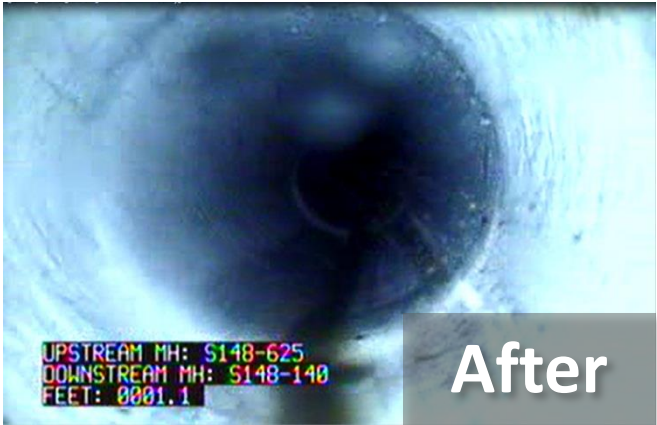
Fiscal Year	Target	Miles Complete	In Progress
FY12	N/A	37.59 miles	
FY13	N/A	7.37 miles	
FY14	19 miles	16.5 miles	
FY15	28 miles	25.96 miles	
FY16	28 miles	26.25 miles	5.75 miles
Totals	75 miles	113.67 miles	

# Number of Main Breaks by Fiscal Year



Source: Hansen System, Water Services Department

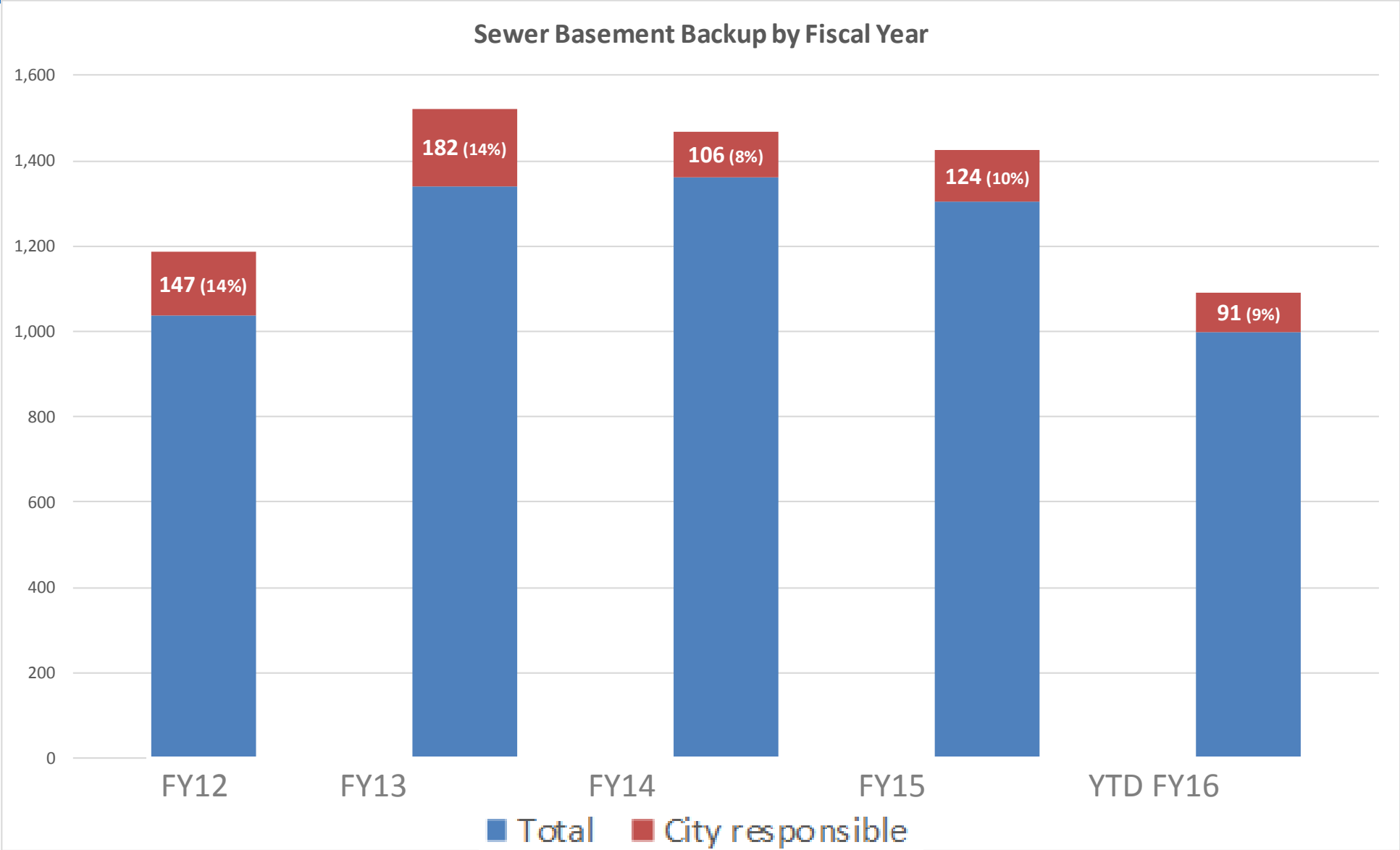
# Citywide Sewer Main Rehabilitation



Source: Water Services

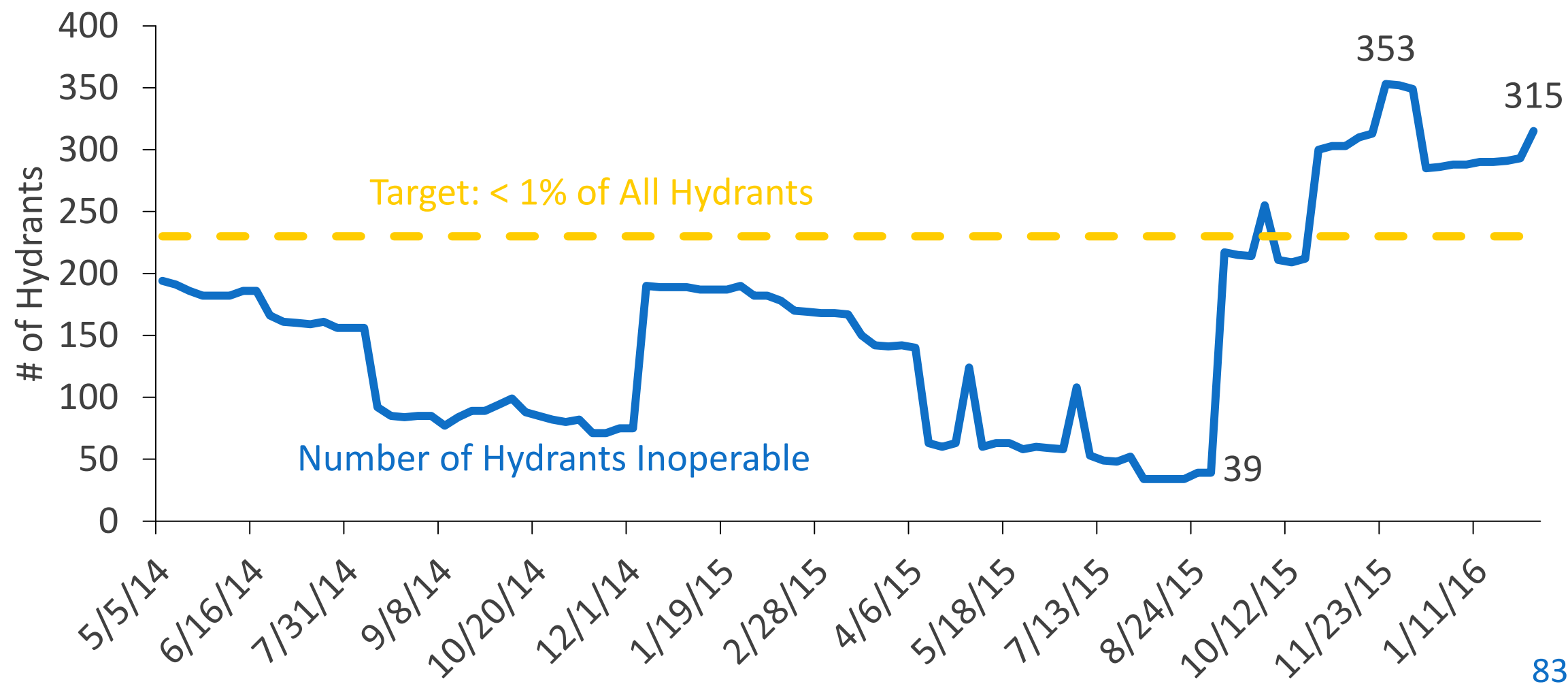
Fiscal Year	Target	Miles Complete	In Progress
FY12	N/A	10.48 miles	
FY13	N/A	3.86 miles	
FY14	13 miles	13.05 miles	
FY15	19 miles	20.88 miles	
FY16	28 miles	19.21 miles	8.79 miles
Totals	60 miles	63.97 miles	

# Sewer Basement Backup by Fiscal Year



Source: Hansen System, Water Services Department

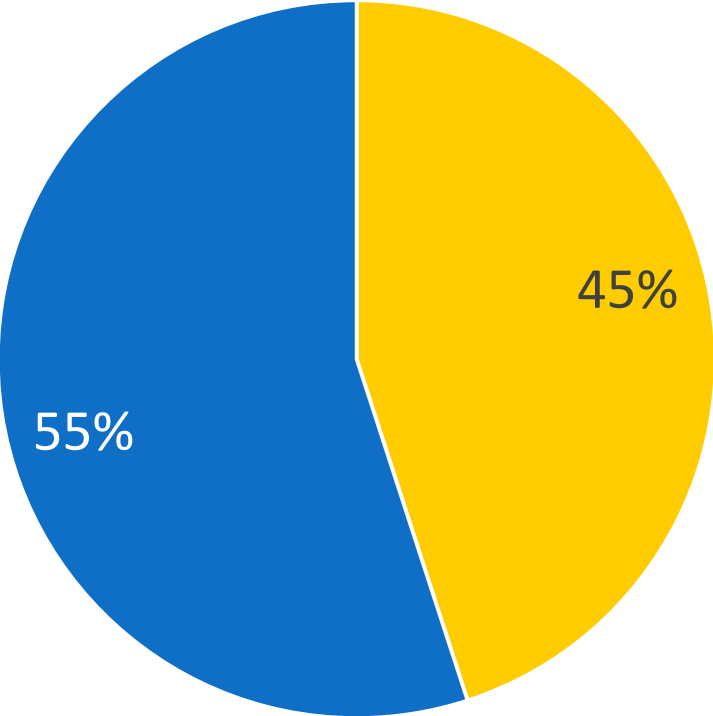
# Number of Inoperable Hydrants



# KCMO Valve Operability

## Initial Operability

System Valves: 35,000  
Hydrant Valves: 24,252



2011

- Inoperable
- Operable

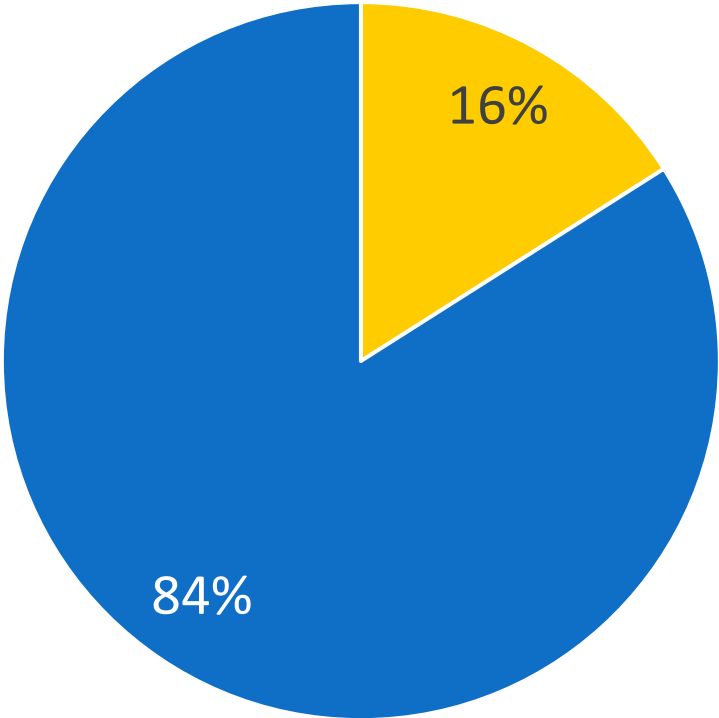
35% Improvement



Calendar Year

## Current Operability

System Valves Assessed: 36,804  
Hydrant Valves Assessed: 5,309



2016 YTD



# Water/Sewer Repair/Restoration Public Outreach

TACTIC	FOCUS
Nixle Text & Email Alerts	All Code 3 water main breaks
Project Letters & Fact Sheets	Letters & fact sheets, with contact info, sent to all customers impacted by a project
Public Meetings	Public meeting held before every project, & WMR Road Show
Project Signage	Project specific signage located in neighborhoods
Local Media Outreach	Media Releases & Targeted Media Availability
KC Water Website	“Current Projects” page with project-specific fact sheets, contact info & zip code search
Bill Inserts	Quarterly customer newsletter & targeted inserts
Social Media	Twitter, Facebook, YouTube & Instagram Updates and responses to Customer inquiries

## Sustainable Infrastructure

41.9

Percent Reduction in Trash  
Tonnage



on track

Detail >

# Sustainable Infrastructure

## Objective 2

Implement the Envision Sustainable Infrastructure Rating System in all infrastructure planning & projects to maximize sustainable development solutions. (through 2019)

# Envision Rating System in the Water Services Department

- Currently 15 WSD employees have gone through and become Envision Specialists
- WSD submitting first project
  - Middle Blue River Green Infrastructure (Currently Ranked at the Gold Level)
- Possible future projects
  - Vivion Road 36" Transmission Main
- Goals for Enhancing the Envision Process
  - Reduce Project Managers Time
  - Streamline the Process
  - Track Sustainable Process for WSD
  - Implementable Plan

# Envision Rating System in the Public Works Department

- Patty Hilderbrand is a National Board Member as APWA's Representative
- Currently 14 Public Works employees have become Envision specialists, and 2 more trained
- Public Works in partnership with HDR is looking at submitting for rating Streetcar Project
- Design professional selections are requiring Envision specialist on the team

## Objective 6

Continue to implement the City's adopted climate protection plan. (Ongoing)

# Measuring our Greenhouse Gas Inventory

## Municipal GHG emissions inventory

- Updates planned annually
- Office of Environmental Quality in process of updating data from 2014 & 2015

## Community-wide GHG emission inventory

- Updates planned every three years
- Next update will be in 2017 once all calendar year 2016 data is available

Goal is to reduce GHG emissions from baseline year 2005 by 30% by 2020.



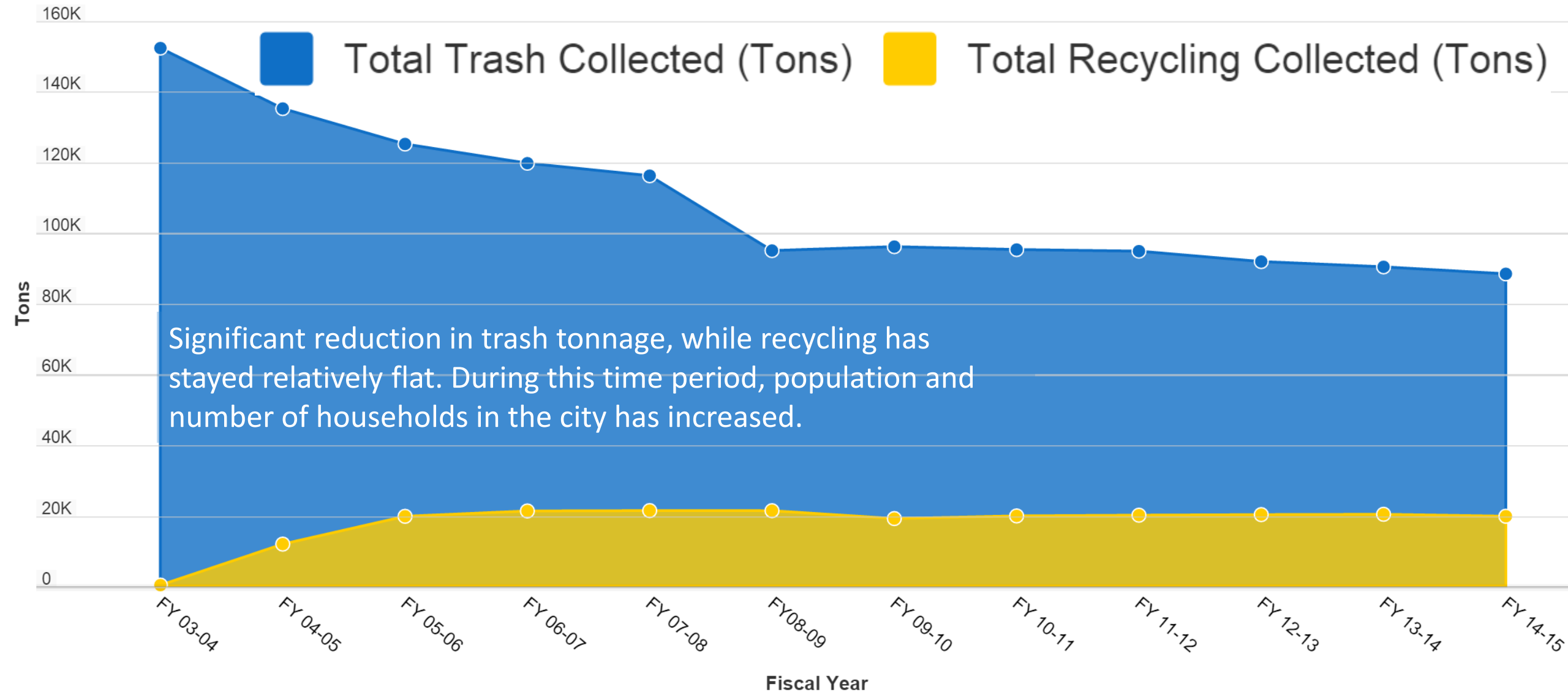
# City Energy Project & Energy Empowerment Ordinance

- Letters have been sent to the owners of all 1,500 buildings in our inventory
- Working to compile energy & water use data for all municipal buildings over 10,000 square feet
  - Will submit data by May 1, 2016
- Drafted rules for ordinance implementation and provided them to the City Energy Project Advisory Committee for feedback.
  - Will finalize and share rules online by end of March 2016
- Working on hiring an Energy Analyst
  - Assist the Chief Environmental Officer in collecting and managing data
  - Prepare an annual report that analyzes the data
  - Provide technical assistance to regulated building owners, managers, and representatives to help them comply with program

## Objective 7

Increase the waste diversion rate through policies & programs that promote recycling & reuse. (2016)

# Tonnage of Trash & Recycling Collected

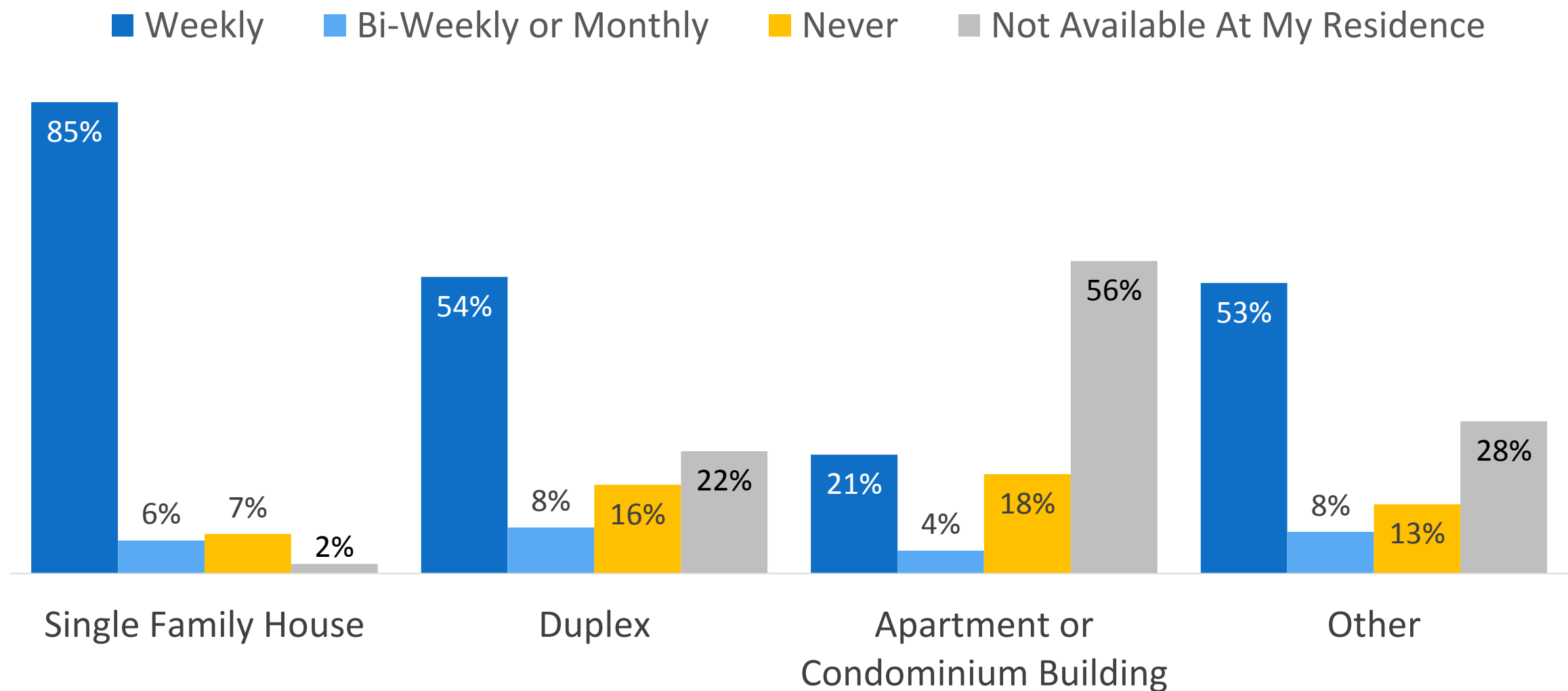


# Citizen Satisfaction with Curbside Recycling Services

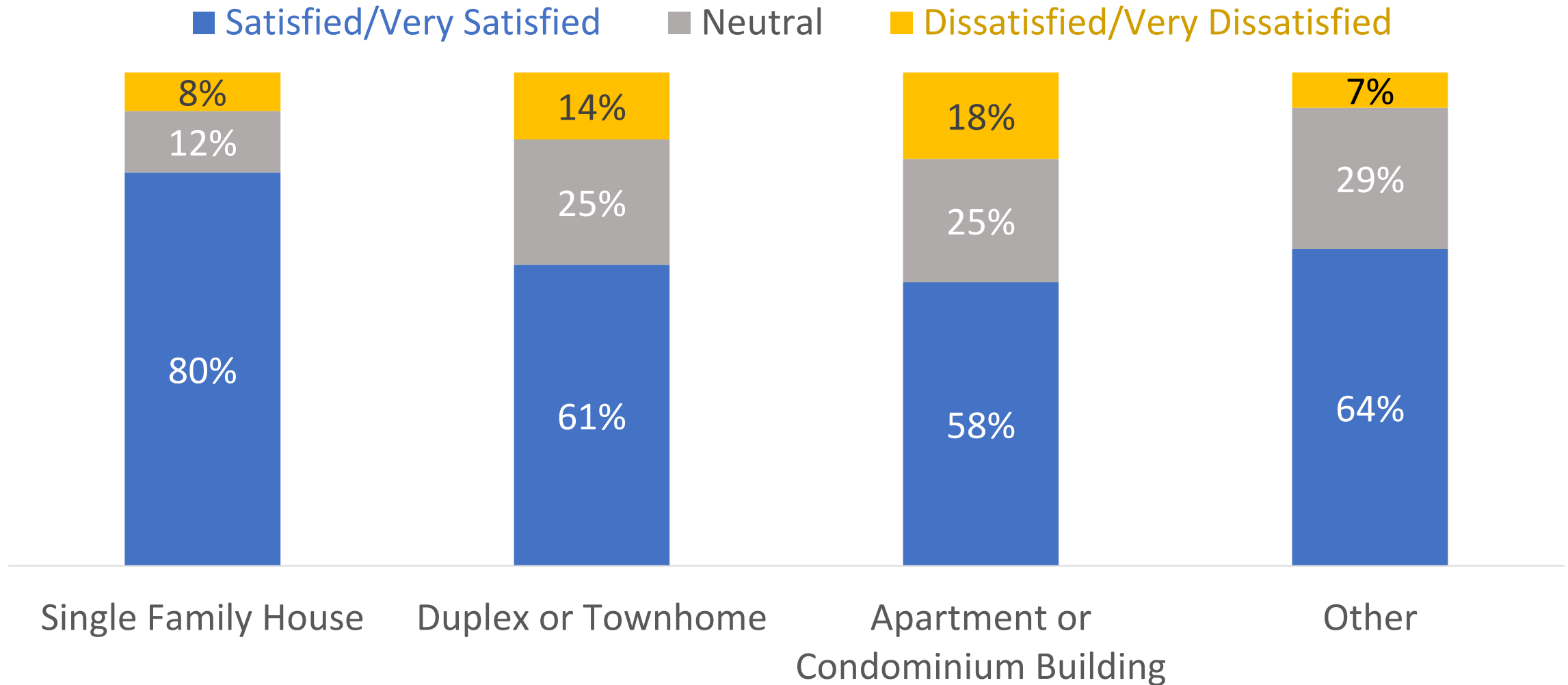


Source: Citizen Survey FY10-FY15 YTD ([kcstat.kcmo.org](http://kcstat.kcmo.org))

# Recycling Frequency by Dwelling Type



# Satisfaction with Curbside Recycling by Dwelling Type





# Strategies for Increasing Recycling

## Strategies for increasing recycling rates:

- Education campaign – Partner with MARC-Solid Waste Management Council on their “Recycle More” campaign
- Identify neighborhood with low participation rate and provide free recycling bins
- Implement a mandatory recycle policy at City facilities
- Implement policy requiring multi-family and commercial recycling

## A mandatory recycling program would need to include an ordinance with the following:

- Why trash separation is mandatory
- To whom mandatory separation and recycling applies
- Which items must be separated
- What processing is required, i.e. cleaning or bundling
- Penalties for noncompliance
- Budget for education and enforcement

Jurisdictions with mandatory recycling:  
Seattle, WA (2005)  
Westchester County, NY (1992)

# Upcoming Recycling & Clean Up Events

## Hard to Recycle Collection Events

May 7, 2016: 8 a.m. – 12 p.m.  
Manuel Tech Career Center located at  
1320 Truman Road

November 5, 2016, 8 a.m. – 12 p.m.  
Manuel Tech Career Center located at  
1320 Truman Road

## Neighborhood Clean-up events

Northeast Area:  
April 30, 2016, 8 a.m. – 12 p.m.  
Budd & Concourse Parks

Third District:  
Date/location TBA

Marlborough Coalition:  
Date/location TBA

## Objective 4

Create a plan to implement strategic infrastructure investments in the Twin Creeks area that capitalizes on natural features, promotes unique development patterns, builds civic space, & promotes sustainable design & construction. (through 2019)

# Twin Creeks Update

Recently, the Committee has met in December, January and February to finalize recommendations as it relates to:

The Twin Creeks Staff Technical Committee, which is made of representatives of the Parks and Recreation Department, Water Services Department, Public Works, the Office of the City Manager, the Office of the Mayor and City Planning and Development, has been working to implement the recommendations of the Twin Creeks Task Force Study which was recognized by Resolution 150455 in June 2015.

## Possible modifications to the Major Street Plan:

- Staff is reviewing existing Major Street Plan Alignments to assess if is necessary for potential adjustments to primary roadway alignments in consideration of terrain, water features, street functionality, and existing ROW.

## Roadway priorities and estimated costs:

- Roadway priorities are being weighed relation to the plan's recommendation of mixed use nodes, the location of major development projects supported by the City, and the location of a future Platte R3 High School Scenario.

## Existing approved development plans and plats

- A review of all approved plans and plats to better determine the location of the mixed-use nodes.
- This is information will be used to make changes to the future land use recommendations of the KCI Area Plan from a single family future land use to two mixed use nodes.

## Implementation of guidelines/strategies for mixed use

- Associated with the potential Area Plan Update, is the potential to implement guidelines/strategies related to the development of mixed use nodes.

## Geomorphological study

- Water Services is working on this study and will probably be able to provide preliminary results in the spring.

# Stormwater Management

WSD is exploring moving toward a watershed-specific management strategy for stormwater

## In less developed watersheds, based on stream geomorphology

- Analyze receiving stream to better understand what discharge can be released while minimizing flooding & erosion
- Individual subbasins may need unique volume & rate controls based on the resiliency of the receiving stream
- Twin Creeks area currently being studied

## Retention in heavily developed watersheds is based on an effort to “right-size” stormwater discharge to the capacity of existing infrastructure

- Redevelopment should design to downstream system capacity where infrastructure replacement is not feasible
- A predefined volume for specific areas could be determined through modeling

## The water quality storm in Kansas City is approximately 1.5 in. (90% of storms don't exceed this threshold)

- This volume of precipitation spread over 24 hours would typically result in little to no runoff for an undeveloped site
- This is one metric that could be used to set a “one-size-fits-all” volumetric retention control for KCMO
- 1.5 in. over 24 hours coincidentally corresponds with the volume increment between a “2-year” and “10-year” storm & is one way to increase the level of service that can be achieved with older infrastructure

# Stormwater Management: Examples from Other Jurisdictions

## Retention examples

- Philadelphia requires 1.5 in. to be retained on-site
  - Additional watershed-specific discharge rate controls may apply
  - Also complying with a sewer overflow consent decree
- District of Columbia requires a minimum retention of 1.2 in.
  - Up to 1.7" may be retained per development & the 0.5" increment can be traded as a Stormwater Retention Credit
- Many cities require a site-specific volume, based on soil infiltration capacity to achieve natural, undeveloped hydrologic conditions in the post-development site
- Municipalities typically choose a volume in the range of 1.0-1.5 in. based on some relationship between desired level of service & existing infrastructure capacity



# KCStat

[kcstat.kcmo.org](http://kcstat.kcmo.org)

March 1, 2016

#KCStat

Transportation & Infrastructure